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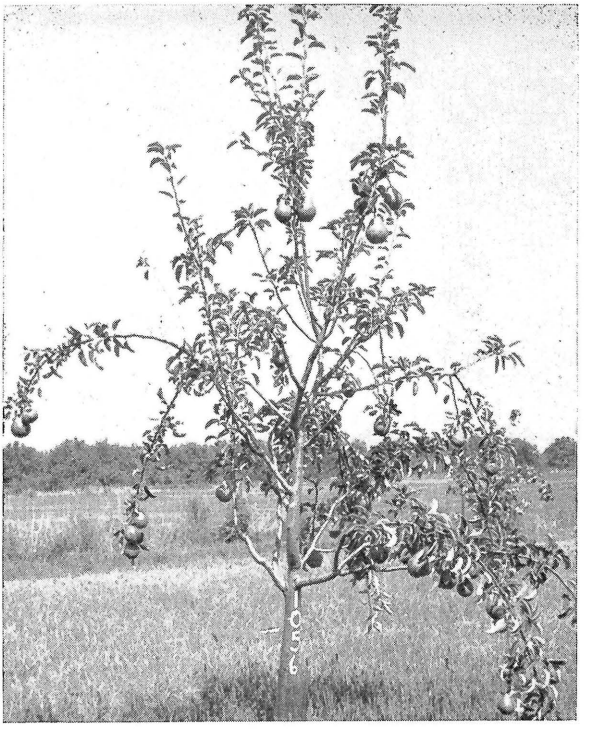
Preliminary Evaluation of New and Uncommon Pear Varieties

Including Comparison with Standard Sorts



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FREEMAN S. HOWLETT

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Agricultural Experiment Stations of Alaska, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; United States Department of Agriculture, cooperating.

RESEARCH BULLETIN 790

OHIO AGRICULTURAL EXPERIMENT STATION

Wooster, Ohio

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TECHNICAL COMMITTEE FOR NORTH CENTRAL REGIONAL PROJECT NC–7

The Introduction, Testing, Multiplication and Preservation of New and Useful Plants of Potential Value for Industrial and Other Uses and for the Preservation of Valuable Germ Plasm of Economic Plants.

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Federal Project HC: b-11-5
C. O. Erlanson, Plant Introduction Section
W. E. Whitehouse, Plant Introduction Section

Grateful acknowledgment is made to Mr. Thomas Fowler, Field and Laboratory Technician of the Department of Horticulture of the Ohio Agricultural Experiment Station. Mr. Fowler was responsible for several major aspects of the work reported in this publication, including the harvesting of the fruit at proper maturity, fruit descriptions, fire blight susceptibility records, and responsibility for photographs of individual fruits. Without his meticulous attention to detail as well as his unfailing interest in the project as a whole this publication would have been impossible.

Grateful acknowledgment is made to Dr. W. E. Whitehouse of the Section of Plant Introduction, who supplied much information with respect to the varieties obtained from the U.S.D.A. The notes of F. C. Bradford were generously made available to the author for use in compiling the portion included under "origin", "source", and "description" of these varieties.

PRELIMINARY EVALUATION OF NEW AND UNCOMMON PEAR VARIETIES INCLUDING COMPARISON WITH STANDARD SORTS

FREEMAN S. HOWLETT

In the middle of the 19th century amateur pear production in America experienced an enthusiastic upsurge. Naturally enough an interest in pear varieties accompanied this exceptional period of production and the number of varieties then grown was greater than at any time since. According to the records of the Massachusetts Horticultural Society (2), there were about 1000 varieties in the Manning Pomological Garden in Salem, Massachusetts in 1842. From that time on there has been a continuous reduction in the number of varieties, not only in commercial plantings, but in home and farm orchards as well. This process has continued until at present the pear, as grown commercially in the United States, is represented by a surprisingly small number of varieties, almost entirely of European origin. This situation continues in spite of the fact that an impressive number of pear varieties have been introduced into this country over the past two centuries.

Perusal of the various texts (6, 8, 9, 14, 17) which list or describe varieties of pears indicates that even if certain of these varieties are still available abroad they can no longer be obtained in this country. Hedrick, for instance, (8, 9), refers to a number of varieties which certainly occupied a place of some importance in early twentieth century production but which today are unobtainable in any nursery.

This reduction in pear varieties is in part a result of rigorous requirements for commercial acceptance and maintenance. Those varieties which have survived the process of elimination must necessarily possess such distinctive fruit qualities as superior flavor, a satisfactory harvest season and good keeping qualities which includes post-storage softening without significant loss of flavor. The fact that Bartlett, Beurré Bosc, Beurré d' Anjou and the Doyenne du Comice continue to hold a place in commercial production, especially in the extensive pear regions of the West Coast, serves as evidence of the degree to which

these varieties possess the above-mentioned favorable characteristics. The value placed upon fruit quality becomes even more evident in view of the fact that these varieties have maintained their position in spite of unfortunate tree characteristics such as a marked susceptibility to the fire-blight organism, **Erwinia amylovera.** Furthermore they compete successfully with varieties such as Kieffer, which has an oriental inheritance and is outstanding in its resistance to attacks of fireblight.

Actually as time went on the importance of the blight-resistant factor appeared to decrease as the centers of pear production moved to areas where growers automatically put into practice a reasonably satisfactory program of blight control. At the same time attempts to build production upon resistant varieties, having only a poor to fair flavor, met with only sporadic success. Judging from past experience, it would appear that any really successful commercial venture must be based upon accepted European varieties or upon new ones having similarly well-flavored fruits. Obviously the ideal situation will exist only when some future breeding program produces a pear that is both blight-resistant, and of superior quality. But in reality it must be admitted that any full scale breeding program has already been restricted by the drastic reduction of pear varieties. Apple breeding programs, for instance, have been able to draw upon an extensive stock of possible parents. From early colonial days, the hedgerows of the country have contributed generously to the introduction of new apple varieties. But the fence rows are no longer crowded, if in fact they ever were, with pear seedlings waiting for some observant enthusiast to incorporate them in a breeding program. Furthermore with no organized institution responsible for maintaining a pear collection, only the commercially important varieties continued in propagation. As a result there has occurred a lamentable loss of germ plasm suitable for future pear breeding programs.

Recognizing this limiting situation and well aware of the fact that pear varieties once available in this country were presently unavailable, the United States Department of Agriculture through the Section of Plant Introduction undertook, about twenty-five years ago, to reintroduce some of the varieties still of commercial significance in Europe.

In addition to these older varieties the Department of Agriculture included in its introduction program varieties recently originated in European nurseries. This pear collection was established at Glenn Dale Maryland under the supervision of F. C. Bradford. During a period extending roughly from 1930 to 1940 trees from this collection were

made available to various experiment stations interested either in supplementing the list of commercial varieties or in utilizing them in pear breeding.

This was undoubtedly an important step toward reestablishing and increasing the depleted number of pear varieties in the United States. But unfortunately no organized, standardized procedure of cultivation and evaluation was set up among the states to which these varieties were distributed. In addition many of these introductions established at Glenn Dale proved to be extremely susceptible to fireblight in that location. Frequently the trees never fruited or else fruited for only a year or so before they were destroyed. To make matters worse the states evaluating such introductions locally had a similar serious fireblight problem with consequent loss of trees.

During this same period the Ohio Agricultural Experiment Station had been collecting from various sources a considerable number of newly introduced pear varieties of domestic origin. In Ohio certain of these varieties were established on the Old Home blight-resistant stock which was obtained from California in 1936. Probably the most successful Bosc orchard in Ohio was set out in 1937 in the station orchards on Old Home. At the same time that trees on their own framework were succumbing in considerable numbers to fireblight the same varieties on Old Home were maintained in fruiting condition despite the loss of limbs and branches due to this destructive organism.

With a considerable pear collection already established at Wooster, the Department of Horticulture there availed itself promptly of the opportunity to secure the European varieties offered by the Section of Plant Introduction. The Ohio objective at that time was, first, to ascertain whether any variety either newly originated or recently introduced, having some record of European use, might prove of sufficient value to augment the small number of commercially-significant varieties, particularly under eastern and more specifically Ohio conditions. Secondly, it was proposed to obtain sufficient information with respect to varietal characteristics to estimate the possible value of a given variety to a future breeding program. The objective of such a program aimed at obtaining a variety of good dessert flavor would be to obtain one which also carried a definite factor for blight resistance.

Subsequent to the Research and Marketing Act of 1946, Regional Project NC-7, stressing the introduction, multiplication and testing of various plant materials, was set up as a cooperative project between the

states of the North Central Region and the United States Department of Agriculture. The Ohio station was authorized under NC-7, subproject 3 (now Ohio Hatch 73, NC-7) to further augment and evaluate the present collection of pear varieties. As a result the number of varieties topworked on Old Home was increased still further until at present over 190 varieties, strains and selected seedlings are maintained at the Ohio station. With the development of this federal project the emphasis has shifted from evaluation in terms of commercial acceptance to significance in terms of pear breeding programs within the states of the region. At the same time it is obvious that mere maintenance of the varieties for the basic purpose of supplying scion wood or buds until varietal significance is established is naturally of major importance.

This publication then is designed to present the results of what might be termed a preliminary examination of 120 pear varieties, to include a reevaluation of those previously grown to some slight extent early in the century, and to describe recent introductions not previously available in this country. In the latter case the possibility of commercial acceptance cannot be entirely overlooked; in the former the maintenance of germ plasm is presumably the chief contribution.

The distinctive characteristics of these varieties as observed at Wooster should enable future investigators to make selections in terms of their particular problem for future trial under their own environmental conditions. It is also to be hoped that a publication of this nature will serve to encourage a program of pear breeding in those states where increasing consumer population and increasing farm markets might justify an increase in pear production.

ESTABLISHMENT OF THE PLANTINGS

The pear varieties described in this publication were established in four separate blocks which differed as to time of planting, rootstock and type of intermediate framework, as well as varieties.

Orchard A, which has since been removed, was established prior to 1924. It was comprised of 76 trees involving 51 varieties resulting from domestic breeding programs or of varieties contributed by private agencies for possible commercial trial. Since Old Home stock was not available at that time, all varieties were developed on their own framework.

In Planting B, established in 1936, Old Home was used to some extent, particularly as a means of comparing Bosc on its own trunk, Bosc on Kieffer and on Old Home. Other standard varieties were included as well as a number of introductions which were topworked on Old Home. The 208 trees in this planting involved 55 varieties.

Fig. 1.—Topworked shoots developing on Old Home tree.

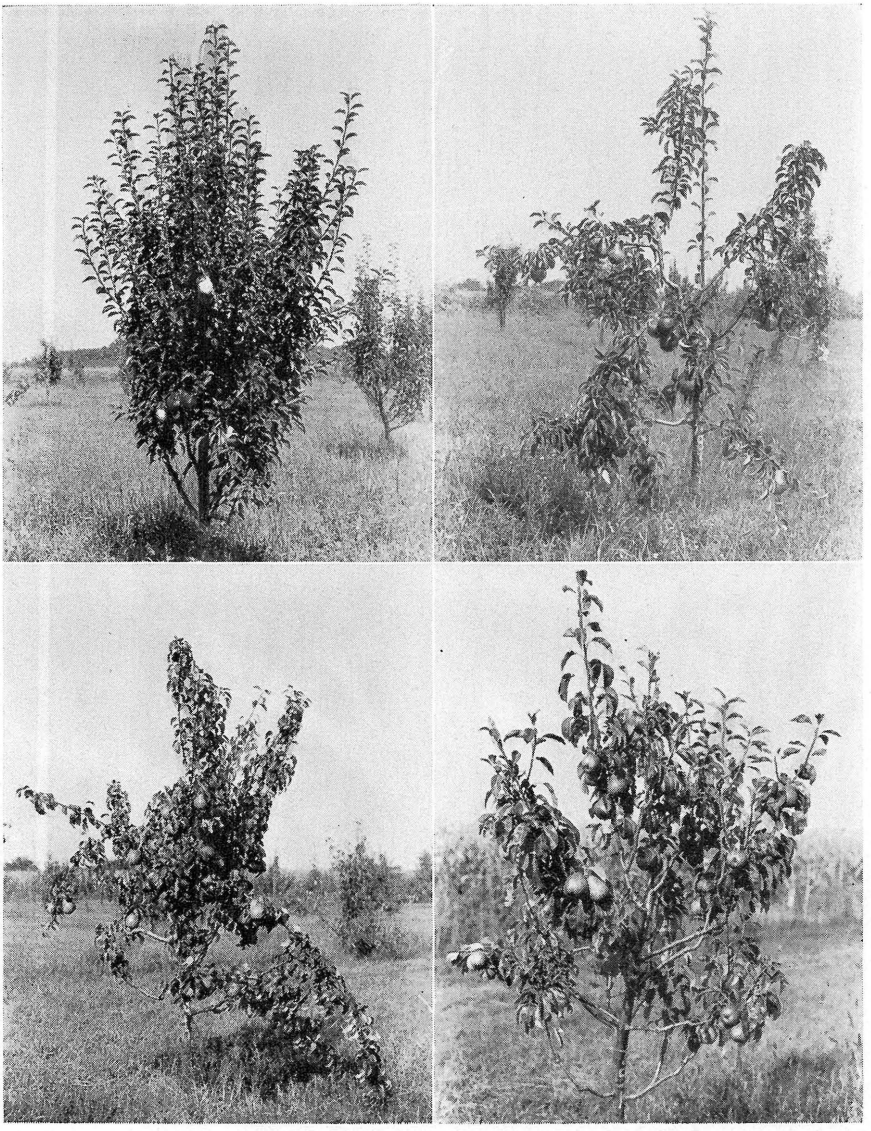

Fig. 2.—Bearing trees on Old Home—1955

Upper: left —Bartlett standard tree
right—Max-Red Bartlett dwarf tree

Lower: left —Beurre Dumont dwarf tree
right—Dana Hovey dwarf tree

Fig. 3.—Bearing dwarf trees—Old Home framework—1955

Upper: **left —Laxton's Foremost**
right—Sheldon

Lower: **left —Willard**
right—P. I. 170066

Planting C, which was established in 1939 was gradually increased by trees obtained from the Section of Plant Introduction. At the same time Old Home trees were established on quince and Bartlett seedlings which were topworked later to the numerous blight-susceptible varieties obtained from other sources. Two hundred eighty six trees comprising 118 varieties are included in this planting.

Planting D was established in 1952 and consists entirely of trees having an Old Home framework budded either on Bartlett seedlings to produce standard sized trees or on Angers quince rooted cuttings to induce dwarfing. As new varieties were received these were consistently established on the Old Home trees. Four hundred ninety three trees involving 181 varieties are included in this planting.

In view of the varied procedures in establishing these plantings and because it was necessary to make use of the Old Home framework it is impossible to provide information concerning tree characteristics such as shape, density of growth and the angles formed by the union of the primary scaffold branches with the trunk. In fact it becomes impossible to estimate the time required for first flower formation and consequent bearing because the dwarfing effect of the quince roots produced flowers in 2 or 3 years as opposed to the six or seven commonly required for standard trees.

Although this information as to tree characteristics would have been useful it was necessary to sacrifice this type of data in order to maintain the planting. In fact blight susceptibility was so extreme in the case of certain European varieties obtained from the Glenn Dale station that it resulted in the loss of the tree prior to fruiting. However, by anticipating the situation and budding these precarious varieties on Old Home it was possible to preserve a variety even though its evaluation was considerably delayed.

Topworking to the varieties in question was usually carried out over a two-year period utilizing all available lateral shoots measuring three-eighths of an inch or more in order to produce trees with 8 to 12 scaffold branches (Figure 1). The buds were usually inserted at about 10 to 18 inches from the trunk.

All of the plantings were established in bluegrass sod prior to first flower formation. Nitrogen-carrying fertilizer was applied only as essential, since the restriction of rapid growth was considered advisable from the point of view of blight prevention.

The trees were not pruned except as it became necessary to remove unbudded Old Home laterals. Actually budding seemed to spread the trees enough to achieve satisfactory shaping. The trees were examined

at intervals of a week or oftener for the purpose of prompt removal of all blight-infected portions. And yet all precautions have not prevented considerable loss of wood in orchards B, C, and D. Although loss of trees on the Old Home framework has been kept to a minimum, nevertheless, in the case of certain varieties large branches have had to be eliminated down to the point of union. Certain newly introduced varieties obtained from Glenn Dale have been conspicuously unfortunate in this respect. During 1955 five antibiotic sprays were applied and seemed to be of some value in reducing the ravages of the disease.

The establishment of a number of the varieties on quince rootstocks naturally resulted in much earlier bearing than would have occurred with Bartlett seedlings. Although the yields have not been high they have been generally commensurate with the bearing surface of the trees. Figures 2 to 4 illustrate trees with typical yields. Figure 5 shows a young tree of Ewart on quince as well as on older tree on a Bartlett seedling with a third on quince roots comparable in age to the standard-sized tree.

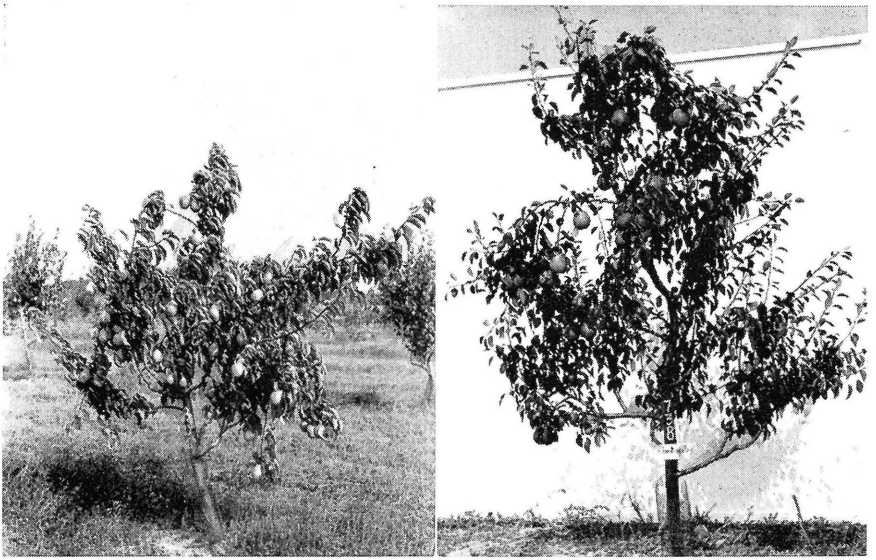

Fig. 4.—Bearing Dwarf trees—Old Home framework

Left: Canada (Vineland) 29014—1955
Right: Flemish Beauty—1953

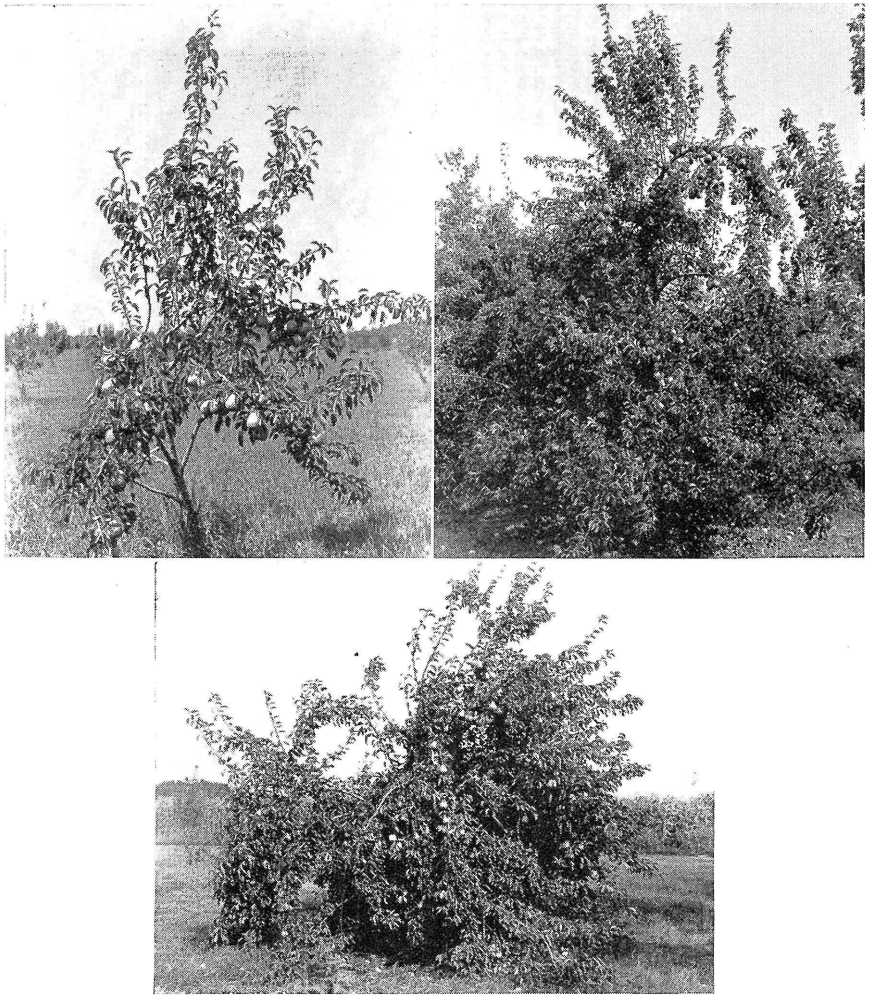

Fig. 5.—Dwarf and standard trees of Ewart—1955

Upper: left —Ewart dwarf—planted 1952
right—Ewart standard tree—planted 1941

Lower: Ewart dwarf—planted 1940

PRESENTATION OF THE RESULTS

The varietal descriptions presented in this publication are definitely abbreviated as compared with those found in the standard works of reference (4, 6, 8, 9, 10, 11, 17). Information is presented only with respect to major characteristics. The detailed descriptions recorded in every case remain on file. In addition to the abbreviated notes here listed, photographs of typical fruits of all but three varieties are presented in Figures 6 to 22. In each case the typical shape and representative size are indicated. The varieties are not arranged alphabetically but generally according to the sequence of harvesting. A concerted attempt was made to choose a typical specimen and since these were selected entirely by one individual variation due to the subjective factor is minimal.

In using this material the following explanations are to be kept in mind.

Name

Any variety listed in standard reference works will appear under the same name here. Otherwise the name selected by the originator or institution is used. No attempt has been made to anglicize the names of varieties of foreign origin.

Synonyms

The synonyms here used have usually been taken from Hedrick (8), Le Verger (11) and from notes supplied by the Section on Plant Introduction, Horticultural Crops Research Branch, Agricultural Research Service, United States Department of Agriculture.

Origin

The origin of a variety or seedling has been ascertained as far as possible from reference works, personal correspondence and any printed material available. In the case of certain new or unfamiliar varieties it has not been possible to obtain this information.

Source

In this publication "source" refers to the precise individual, institution, or nursery from which the trees, budwood, or scion wood were obtained for topworking in the Station orchards. As indicated much of the material was obtained from the Section of Plant Introduction of the United States Department of Agriculture. The precise date at which this variety was obtained by the United States Department of Agriculture and by the Experiment Station are likewise noted. It was felt that in these plantings where maintenance of germ plasm is one of the major objectives the exact source of the material involved should definitely be made a matter of record.

Description

In this section there is presented a partial, but by no means complete, list of references in which some of the descriptive features of the variety in question may be found. Where Hedrick (8) has given a complete description of the variety, no earlier citations are listed. Notes supplied by W. E. Whitehouse of the United States Department of Agriculture have been invaluable in listing some of these earlier citations. Although it is recognized that the list of citations is by no means complete, nevertheless, the type and number of references tend to serve as an indication of the age of the variety and the extent of distribution since its origin.

Fruit Characteristics

All of the descriptive material is taken from data obtained by actual observation of the fruits at Wooster and not from previously printed descriptions. Deriving thus from a single source, comparison of characteristics from variety to variety is reasonably satisfactory.

Size

An attempt has been made to present the average size of fruits as obtained at Wooster. It is recognized that in some instances other descriptions may indicate different size ranges. This variation in description is most apparent in regard to European reports of size. Fruits used in the photographs were selected to represent average size for the variety in question.

Shape

The descriptive terms used in this connection are those common to Hedrick (8, 9); and vary but little from those used by Zielinski (18). In describing pear color the chief concern is with the amount and type of blush and the amount and type of russet. Although the notations refer to various shades of green and yellow it must be remembered that a general loss of chlorophyll is normally associated with ripening and that the development of yellow pigmentation is characteristic of final maturity. It is true, however, that as the fruit softens following harvest certain varieties show a rapid breakdown of green coloration with a resultant development of pronounced yellowing while in others the soft fruit still shows a considerable amount of chlorophyll. Any marked tendency along these lines is noted under "Color".

Flesh

Flesh characteristics were to a large extent observed by Thomas Fowler and are, therefore, reasonably comparable. It must, however, be recognized that seasonal differences occur as a result of variation in

environmental conditions and that this variance tends to affect flesh color, its tenderness, juiciness and even the degree of acidity. It is probable that a similar difference occurs in prevalence and location of the most predominant masses of stone cells (5).

Flavor

The determination of flavor was largely a matter of the subjective assessment of a number of flesh characteristics. The extreme variation in personal preference affects the evaluation of flavor more than any other characteristic. The findings here presented as to flavor were admittedly on the conservative side. They represent the best judgment of the authors and may at least be taken as a basis for comparison. Since several of the varieties did not mature and soften properly at Wooster, it is apparent that environmental conditions have affected the results. Furthermore it must be admitted that in a number of instances the flavor as observed here was in no way as satisfactory as reported in Europe.

Harvest Date

The precise harvesting date during the period from 1947 to 1955 of the varieties and seedlings in question is presented in Table 2 to 10. In these tables it will be noted that not all varieties are included in any one year, the tests for firmness having been made only when 10 to 20 fruits of one variety were available. Table 11 and 12 present the average date of harvest together with the average number of days in the growing season. In the section on fruit description which follows, the harvest date is indicated according to a particular week within a given month.

Several indices were utilized for the purpose of ascertaining the most favorable period for harvesting a particular variety. Such European records as were available for certain importations were relatively valueless. For instance the season of use might be indicated rather than the precise harvesting date, since in Europe this particular factor has never assumed the importance which it has acquired in this country. In the Wooster tests such indices as ease of separation from the tree, skin smoothness, color of the lenticels and degree of green coloration were primarily utilized to indicate a suitable picking date. The length of previous growing seasons was also considered to some extent. The requisite degree of firmness as registered by the Magness-Taylor pressure tester (12) was used as an indicator for Beurré Bosc, Conference, and occasionally for others. With the majority of varieties, however, the precise amount of firmness which would reliably indicate the point

beyond which fruits should no longer remain on the tree had not yet been determined. In cases of this kind pressure test findings were used as a guide only when confirmed by other indices.

The closest possible attention was given at all times to removing the fruit at the time considered most favorable. Thomas Fowler was responsible for judging this factor in order to maintain a consistent policy.

Table 2 presents the harvesting sequence together with the firmness of fruits as recorded for 1947. This season, as indicated by Table 1, was characterized by an August temperature which reached an all-time high, an average September and an above-normal October temperature. Precipitation was exceptional in August; more than average in September and less than average in October. The harvest season was by all odds one of the shortest (42 days Maxine to Winter Nelis) during the 1947 to 1955 period—a result presumably of the warm temperatures in August and October. The variation in firmness ranged from 8.9 pounds in the case of Doyenne du Comice to 18.6 for Bayerische Winterbirne. It was found in fact that the varieties tested might be roughly grouped into three classifications with respect to firmness: the relatively soft, such as Maxine, Duchesse de Berry d'Ete, Beurré d'Anjou, Patten and Duchesse de Bordeaux. At the other extreme were Cope's Seedless,

TABLE 1.—Average Daily Temperature and Average Precipitation During August, September and October. 1947-1955. Wooster, Ohio

Year	Average Temperature (degrees fahrenheit)			Average Precipitation (inches)		
	August	September	October	August	September	October
1947	76.2*	64.3	59.8	7.06	3.73	1.64
1948	69.7	64.7	48.8	2.10	2.19	2.32
1949	71.5	58.6	56.7	3.40	2.08	.98
1950	68.1	62.1	55.3	3.67	1.58	1.26
1951	69.3	61.0	55.1	2.61	3.24	1.29
1952	70.1	62.1	46.1	3.10	2.93	1.03
1953	70.0	62.8	53.8	1.43	1.21	.33
1954	69.4	65.1	52.9	2.40	1.88	7.04
1955	73.0	63.8	51.7	3.48	2.85	3.32

*All time high.

Bayerische Winterbirne,Lawrence, Ovid, Willard and Campas. Varieties having an intermediate degree of firmness were Clapp Favorite, Lincoln, Bartlett, Gorham, Cayuga, Laxton's Progress, Beurré Bosc and Kieffer.

In 1948 (Table 3) the August temperature was much lower than in 1947, similar in September and lower again in October than the previous year. The rainfall was definitely less than the preceding year up until October. Although the harvest dates of the early ripening varieties including Bartlett were advanced over the 1947 season, yet, curiously enough, from the time that Gorham was harvested the reverse was true and the remainder of the varieties ripened later than was the case in 1947. Furthermore the length of the period from the harvesting of Maxine to that of Winter Nelis was 12 days longer than the previous year. This delay in harvest and the longer picking season occurred despite almost identical average September temperatures. The October temperature, however, was definitely cooler.

In 1949 (Table 4) pressure tests were made and recorded only through Clyde which was harvested five days earlier than in 1948, on September 20th, and 26 days earlier than in 1947. Bartlett, as well as other varieties were harvested much ahead (14 days) of 1947. Examination of the data in Table 1 shows weather considerably cooler than in 1947. The period of harvest from Maxine to Clyde was 29 days as compared to 41 days in 1947, indicating the association of lower temperature, and possibly of lower rainfall, with a shortening of the harvest season.

Table 5 presents the harvesting and firmness data for 1950. Generally speaking, the difference in temperature between 1949 and 1950 was not particularly significant. August of that year was somewhat cooler than the previous August; September somewhat warmer with October showing little variation. The length of the 1949 and 1950 harvest periods from Maxine to Clyde was very similar in both cases. It is also to be noted that Beierschmitt, Maxine, Fame, Louise Bonne de Jersey, Seckel, Doyenne du Comice, Duchesse d' Angouleme, Lawrence and Waite were relatively soft at harvest.

With the exception of slightly less rainfall in August and slightly more in September, temperature and rainfall for 1951 were very similar to 1950. The data in Table 6 show a harvest period of 51 days elapsing between Maxine and Winter Nelis, this being somewhat shorter than 1950. Picking dates for the varieties were very similar in 1951 to those of 1950. Again the varieties which were found to be relatively soft at harvest were Beierschmitt, Maxine, Louise Bonne de Jersey, Beurré d' Anjou, Duchesse d' Angouleme, Duchesse de Bordeaux and Waite.

TABLE 2.—Harvest Dates and Firmness of Fruits of Pear Varieties at Time of Harvest. 1947. Wooster, Ohio

Variety	Pressure (lbs.)	Date Harvested
Beurré Gifford		Aug. 12
Laxton's Superb	11.5	22
Clapp Favorite	12.2	25
Lincoln	13.3	Sept. 5
MAXINE	9.5	5
Tyson		5
Beierschmitt	11.4	6
Michigan #572	12.6	6
Bartlett	14.2	9
Bartlett (Russet Strain)	11.2	9
Conference	11.8	9
Flemish Beauty		9
Gorham	12.3	9
Cope's Seedless	17.9	10
Duchess de Berry d'été	9.6*	10
Tait	10.6	10
Calebasse M. C. Furst		12
Cayuga	12.4	12 & 18
Laxton's Progress	13.5	12
Michigan #562	13.4	12
Robert de Neufville	12.1	12
Saint Gilles	13.5	12
Pulteney	11.0	17
Doyenne du Comice	8.9	18
Laxton's Record	11.3	18
Shea	13.0	18
Beurré d'Anjou	9.3	19
Doyenne Georges Boucher	12.0	19
Stanley	12.8	19
Canner	11.4	24
Fame	10.8	24
Madame Ernest Baltet	12.3	24
Michigan #504	12.7	24
Patten	9.3	24
Seckel	11.7	24
Worden Seckel	15.6	24
Ewart	13.9	27
Bayerische Winterbirne	18.6	Oct. 1
Lawrence	16.9	1
Smythe	15.9	1
Waite	11.6	1
Beurre Bosc	13.4	2 & 7

*Over-ripe.

Variety	Pressure (lbs.)	Date Harvested
Beurre Superfin		8
Louise Bonne de Jersey		8
Alexander III	13.2	9
Beurré Baltet Pere	14.2	9
Beurré Diel		9
Caywood	12.6	Oct. 9
Charles Cogneé	14.0	9
Souvenir de Jules Guindon		9
Christmas Holiday		16
Clyde	13.8	16
Covert	14.4	16
Duchesse de Bordeaux	9.8	16
Josephine de Malines	13.2	16
Kieffer	12.3	16
Olivier de Serres		16
Ovid	15.8	16
Passe Crassane		16
Tardive de Ninove		16
Willard	16.1	16
Winter Cole	13.3	16
Winter Nelis (Russet Strain)		16
Campas	16.4	17
Dana Hovey		17
Michigan #566	15.4	17

1952 differed little from 1951 either in the temperature or rainfall of the August to October period. The principal difference consisted in the lowest average October temperature recorded during the 1947 to 1955 period. As indicated by data in Table 7 the period from Maxine to Winter Nelis was 57 days, or 6 days longer than in 1951. With few exceptions the picking dates of all varieties were very similar for the two seasons. Relatively soft varieties at harvest were Maxine, Robert de Neufville, Laxton's Wonderful, Duchesse d' Angoulême, Waite and Lawrence.

1953 differed in temperature from 1952 principally by a distinctly warmer October. On the other hand, rainfall in 1953 was generally more deficient than in any August to October period from 1947 to 1955. It is interesting to note, however, that the period from Maxine to Winter Nelis for 1953 was almost identical with that for 1952 (Table 8). Again Beierschmitt, Duchess de Berry d'ete, Early Seckel, Lincoln, Patten, Lawrence and Waite showed considerably less firmness at harvest than the other varieties.

TABLE 3.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1948. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated								Harvest dates
	August	September					October		
	30	7	13	17	24	30	6	12	
Maxine	8.8								Aug. 30
Bartlett	13.5								Sept. 2
Beierschmitt	11.0								2
Flemish Beauty	11.2								2
Lincoln	14.5	9.0							7
Michigan #562		11.4							7
Fame		9.0							7
Gorham	14.4	12.2							8
Bartlett (Russet Strain)		12.6	10.4						13
Cayuga			12.7						14
Copa's Seedless		14.3							14
Conference	14.0	12.6	11.9	11.7					17
Patten				8.8					17
Seckel				10.3					18
Worden Seckel				11.6					18
Beurre d' Anjou					9.0				24
Canner					11.0				24

TABLE 3.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1948. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated							Harvest dates
	August	September				October		
	30	7	13	17	24	30	6	12	
Louise Bonne de Jersey			8.9						24
Shea			13.0		10.5				24
Waite					11.4				24
Doyenne du Comice					11.0				25
Clyde				13.8	13.0				25
Pulteney			12.1		9.3				25
Beurre Bosc			15.5		14.4	14.1	13.4	13.0	Sept. 29 and Oct. 6 & 12
Smythe				12.8					6
Duchesse d' Angoulême					16.6	13.6		13.5	12
Lawrence					11.0	12.0			12
Kieffer								12.8	13
Ovid						15.0			13
Campas							13.9		14
Josephine de Malines						17.1	17.4	16.3	14
Winter Nelis (Russet Strain)								11.4	22

TABLE 4.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1949. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated										Harvest dates
	August					September					
	19	22	26	27	31	2	6	9	12	18	
Clapp Favorite	7.7										Aug. 19
Laxton's Superb	8.9										19
Beurre Hardy		12.7									22
Maxine		9.2									22
Bartlett	16.4	16.3	14.7								26
Beierschmitt		10.6	11.2								26
Gorham	15.1		11.4	11.4							30
Michigan #562				9.8							30
Bartlett (Russet Strain)				14.7		13.4	13.9				Sept. 6
Michigan #572					10.7						6
Laxton's Progress							12.1				6
Shea							12.0				6
Cayuga				10.2		11.3	11.5				7
Seckel				11.5			11.4				7
Worden Seckel							11.5				7
Beurré d' Anjou								11.9			9
Ewart							14.4	12.2			9
Patten								11.2			9
Conference						12.1	12.9	12.2	12.5		12
Doyenne Georges Boucher								11.2			12
Pulteney							11.7		11.6		12
Smythe							15.5		13.1		12
Stanley								12.4			12
Beurré Bosc								13.1	13.4	12.9	13 & 20
Clyde									13.7		20

TABLE 5.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1950. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated															Harvest dates
	August		September								October					
	21	24	1	5	7	14	18	20	22	26	2	5	15	25	30	
Laxton's Superb	10.4															Aug. 22
Clapp Favorite	12.6	12.0														24
Philippe Chauveau	7.7															24
Beierschmitt			10.9	9.6												Sept. 5
Maxine			8.6	7.9												5
Gorham			12.5	12.0												6
Bartlett			14.2	13.5												7
Robert de Neufville					10.1											7
Fame						8.0										14
Laxton's Progress					12.9	12.9										14
Ewart						13.8										15
Michigan #504						10.4										15
Michigan #562						12.8										16
Cope's Seedless				14.3												18
Louise Bonne de Jersey							9.1									18
Seckel						10.3	10.0									18
Smythe						12.1										18
Worden Seckel							10.4									18
Calebasse M. Chas. Furst							11.8									20
Beurré Bosc							13.6	12.9	12.3	12.2						19, 22 & 26
Laxton's Wonderful							9.2									22
Michigan #572							11.0									22
Conference			14.6				13.1	13.2	12.5							26
Doyenne du Comice										9.1						26

TABLE 5.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1950. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated															Harvest dates
	August		September								October					
	21	24	1	5	7	14	18	20	22	26	2	5	15	25	30	
Howell											15.2					Oct. 2
Michigan #437											11.9					2
Stanley											13.2					2
Beurre d'Anjou										13.1	11.4					5
Canner												12.2				5
Clyde										12.8		11.9				5
Duchesse d'Angoulême												10.3				5
Josephine de Malines							13.4	12.3								5
Doyenne Georges Boucher												10.5				6
Duchesse de Bordeaux												12.6				6
Tardive de Ninove												12.4				6
Beurre Diel													10.2			15
Christmas Holiday													13.1			15
Michigan #566													14.5			15
Bayerische Winterbirne													14.2			18
Alexander III													11.9	12.4	12.8	25 & 31
Campas													12.7	12.4		25
Ovid													15.4	14.8		25
Willard													14.3	14.1		25
Kieffer													13.1	12.6		26
Lawrence													12.6	9.8		26
Waite													11.1	10.0		26
Olivier de Serres													18.3		16.4	31
Passe Crassane															15.1	31
Winter Nelis (Russet Strain)													13.1	12.7	13.2	31

TABLE 6.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1951. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated												Harvest dates
	August			September						October			
	20	27	30	4	7	10	14	18	21	4	9	24	
Clapp Favorite	9.9												Aug. 20
Bartlett	16.1	15.2	14.3	13.5									Sept. 4
Beierschmitt			11.1	9.6									4
Maxine			10.2	8.2									4
Cope's Seedless				15.5									10
Gorham				12.4									10
Patten					13.1								11
Seckel			13.0		11.7	11.9	12.2						14
Ewart						14.4		12.3					20
Michigan #504								12.8					20
Beurre Bosc				14.9	14.7	14.4	14.4	14.2	13.9				21
Canner									12.3				21
Conference					14 5	13.0	13.9	13.9	12.3				21
Josephine de Malines									12.3				21
Louise Bonne de Jersey									10.8				21
Clyde										13.4			Oct. 4
Tardive de Ninove									10.4	11.9			4
Beurre d'Anjou										10.0			5
Duchesse d'Angoulême										9.2			5
Doyenne Georges Boucher										10.7			8
Duchesse de Bordeaux										9.5			8
Waite									10.4				14
Kieffer										12.7		11.4	24
Campas											11.8	12.3	25
Willard												12.7	25
Winter Nelis (Russet Strain)											14.0	13.8	25
Lawrence												13.2	26

TABLE 7.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1952. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated												Harvest dates
	August		September							October			
	22	28	3	9	15	19	22	26	29	6	17	23	
Clapp Favorite	11.7												Aug. 22
Laxton's Superb	9.3												22
Beierschmitt		12.5											29
Early Seckel		11.0											29
Maxine		9.5											29
Bartlett		16.1	14.0										Sept. 4
Fame			10.7	9.6									9
Robert de Neufville			11.3	10.1									9
Michigan #562				9.7									10
Michigan #572			12.3	11.3									10
Gorham		12.7	12.5	11.6									11
Laxton's Progress				14.4	11.4								15
Laxton's Wonderful					10.5								16
Michigan #504				13.9	11.4								16
Patten				13.5	11.5								16
Seckel		15.5	13.6	13.2	12.6								16
Duchesse d'Angoulême				11.6	10.4	10.5							19
Conference			13.2	13.2	12.4	11.8							20
Beurre Superfin							10.7						22
Caywood					13.7		11.8						22

TABLE 7.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1952. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated												Harvest dates
	August		September							October			
	22	28	3	9	15	19	22	26	29	6	17	23	
Doyenne Georges Boucher					11.9		12.1						22
Ewart				14.5	13.3		11.7						22
Findling Von Hohensaaten							10.5						22
Michigan #437					14.1		12.8						22
Beurre Bosc				15.7	14.8	14.5	14.4	13.6	13.9				23 & 29
Calebasse M. Chas. Furst				13.7									23
Louise Bonne de Jersey								10.9					26
Beurre d'Anjou						13.4	13.1	13.2					29
Baldwin								12.3					Oct. 3
Canner								12.0		10.6			9
Tardive de Ninove										12.9			9
Covert									13.0				13
Alexander III										13.6	13.1	11.9	23
Bayerische Winterbirne										15.2	15.7	12.8	23
Campas										13.5	13.2	11.7	23
Michigan #566							16.6		15.5	15.2	14.4	12.9	23
Stanley										13.5	13.1		23
Waite									10.4		9.9	8.9	23
Lawrence										13.6		10.4	25
Winter Nelis (Russet Strain)										15.5	14.5	11.7	25

TABLE 8.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1953 Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated														Harvest dates
	August				September							October			
	7	11	25	28	1	4	8	12	16	23	28	5	8	15	
Philippe Chauveau	9.7														Aug. 7
Lemon		8.3													11
Clapp Favorite	13.1	11.9													23
Laxton's Superb	12.4	11.2													23
Maxine			10.1												27
Bartlett			13.1	11.8											28
Beierschmitt			9.8												28
Duchesse de Berry d'té				9.5											28
Early Seckel				8.4											28
Robert de Neufville				10.7											28
Bantam						9.0									Sept. 4
Bererd × 10918						7.5									4
Devoe						10.2									4
Gorham				12.3		11.6									4
Lincoln						9.8									4
Michigan #562						9.9									4
Richard Peters						10.4									4
Duchesse d'Angoulême							11.2								10
Laxton's Progress				13.3	12.8	11.6									10
Patten							8.4								10
Seckel					12.4	11.5	10 7								10
Worden Seckel					12.3										10
Hood								12.6							12
Flemish Beauty								9.5	8.9						16
Laxton's Wonderful							11.0		10 6						16

TABLE 8.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1953. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated														Harvest dates
	August				September							October			
	7	11	25	28	1	4	8	12	16	23	28	5	8	15	
Louise Bonne de Jersey									10.5						16
Doyenne Georges Boucher									10.8						17
Michigan #572									10.6						17
Michigan #592							15.1								17
Beurré Bosc									13.8	12.9					18 & 24
Conference						14.5	15.2		14.0	12.5					23
Duchesse de Bordeaux										10.9					23
Ewart						14.8	14.2	13.9	13.5	12.9					23
Findling von Hohensaaten									9.7	5.1					23
Canada 25141									13.0						23
Canner										11.8					24
Josephine de Malines									13.4	12.9					24
Beurré Baltet Pere										14.4					28
Beurré d'Anjou										12.3	11.0				29
Michigan #437				14.0	14.5				13.4	13.2	10.8				29
Stanley										13.1	12.8				29
Winter Cole										12.5	11.6				29
Lawrence												9.6			Oct. 5
Baldwin										12.9			11.8		9
Tardive de Ninove										12.0			11.5		9
Bayerische Winterbirne										17.0	15.0		14.6		15
Michigan #566										15.5			13.5	15.7	15
Waite												11.2		9.0	16
Alexander III													13.4	14.7	19
Campas													12.4	13.7	19
Winter Nelis (Russet Strain)														14.3	20

Table 9 presents the harvest dates and firmness data for 1954. The period from Maxine to Winter Nelis extended only 47 days which was somewhat less than in 1953. Apart from a higher September temperature, the differences between the two years were slight. The precipitation, however, was considerably greater in both August and September although the moisture in October was excessive. Generally speaking, the firmness of comparable varieties was somewhat lower during October 1954 than in the previous year. Maxine, Richard Peters, Laxton's Wonderful, Findling von Hohensaaten, Worden Seckel, Seckel, Duchesse d' Angoulême, Canner, Beurré d' Anjou, and Waite were among those varieties with a relatively low degree of firmness at the time of picking.

1955 differed principally from 1954 in a higher August temperature and a higher rainfall except in October. It is interesting to note (Table 10) that the period from Maxine to Winter Nelis (Russet Strain) extended over 63 days. The russet strain of Winter Nelis seemed to be delayed in ripening over the large strain, a fact which is largely responsible for the extended period of ripening in 1955. Otherwise the difference in length of the period from Maxine to Winter Nelis would have been more or less similar to that of the previous year. A considerable number of varieties were relatively soft at harvest including Maxine, Beierschmitt, Devoe, Golden Spice, Richard Peters, Duchesse d' Angoulême, Beurré Dumont, Beurré Diel, Lawrence and Waite.

For a certain number of varieties intermittent records are available for periods of from 4 to 14 seasons. Table 11 presents the average bloom and harvest dates of these varieties together with the number of days elapsing between the two. Table 12 presents similar information for those varieties for which records are consecutively available for the period from 1938 to 1955 inclusive. Obviously comparisons can best be made between varieties having identical seasons, but no serious misinterpretation will result unless overly detailed conclusions are drawn from the data as presented.

Data on full bloom in these same two tables show that from the earliest blooming variety to the latest the blooming period extended from April 26 to May 3. The earliest of the varieties under discussion reached full bloom in the following order: Baldwin, Flemish Beauty, Kieffer, and Louise Bonne de Jersey. The latest varieties reached full bloom in this order: Gorham, Howell, Winter Cole and Winter Nelis.

TABLE 9.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1954. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated									Harvest dates
	August		September					October		
	25	30	1	3	8	15	23	7	11	
Early Seckel	7.1									Aug. 25
Maxine	9.1									26
Michigan #562	7.4									30
Michigan #572	12.5									30
Vineland 29012	11.6									30
Richard Peters	8.6									30
Robert de Neufville	11.4									30
Bartlett	15.3	13.8								31
Louise Bonne de Jersey	12.9									31
Max-Red Bartlett			14.6							Sept. 1
Laxton's Progress			14.2							3
Laxton's Wonderful	10.2									3
U.S.D.A. P.I. 170066			12.9							3
Vineland 29014			9.5							3
Findling von Hohensaaten				11.5	10.1					8
Seckel					10.3					8
Worden Seckel					10.1					8
Patten					11.9					9
Calebasse M. Chas. Furst						10.1				15

TABLE 9.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1954. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated									Harvest dates
	August		September					October		
	25	30	1	3	8	15	23	7	11	
Conference					14.1	13.7				15
Doyenne Georges Boucher					11.2					15
Duchesse d'Angoulême						10.9				15
Ewart						14.0				15
Michigan #437				13.6	13.7					15
Old Home						11.8				15
Beurre Bosc						14.1	13.2			23
Canner						11.3	10.0			23
Beurré d'Anjou						12.4	9.7			24
Josephine de Malines								9.5		Oct. 8
Tardive de Ninove								11.0		8
Waite								8.6		11
Covert								13.2		12
Winter Nelis (Russet Strain)									14.2	12
Winter Cole								10.7		13
Alexander III								11.6		14
Bayerische Winterbirne								15.1		14
Campas								11.7		14
President Barabe								11.6		14

TABLE 10.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1955. Wooster, Ohio

Variety	Pressure Test (lbs.) at Dates Indicated																	Harvest dates
	August				September								October					
	15	22	24	29	2	7	9	14	16	19	21	30	3	7	10	19	24	
Clapp Favorite	10.3																	Aug. 15
Early Seckel	10.0																	15
Laxton's Superb	10.0																	15
Doyenne Boussock		6.4																23
Lincoln		9.7																23
Maxine	7.3	7.8																23
Vineland 29012		10.3																23
Starking Delicious	8.5	8.9																23
Robert de Neufville		11.3																23
Beierschmitt		9.3																24
Duchesse de Berry d'été			14.1															24
Bantam		13.2																25
Bartlett		14.1	13.4	13.5	13.0													26
Gorham		11.6	11.7															26
Laxton's Foremost		11.0																26
Max-Red Bartlett		13.9		13.1	13.8													Aug. 26 & Sept. 2
Laxton's Satisfaction				10.8														Aug. 29
Michigan #562				12.7														Sept. 2
Saint Gilles				13.5														5
Devoe					10.2	9.6												7
Ewart						13.4												7
Golden Spice						8.2												7
Patten		12.4		12.4		10.8												7
Cope's Seedless		15.0			13.1		12.1											9

TABLE 10.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1955. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated																	Harvest dates
	August				September								October					
	15	22	24	29	2	7	9	14	16	19	21	30	3	7	10	19	24	
Findling von Hohensaaten						10.6												9
Laxton's Progress		15.1				12.7												9
U.S.D.A. P.I. 170066				13.0		10.7												9
Richard Peters				11.2		9.2												9
Duchesse d'Angoulême							9.9											12
Louise Bonne de Jersey							10.5											12
Seckel					11.5		10.4											12
Flemish Beauty						10.5												13
Howell							11.5											13
Ottawa					12.5	11.6					11.2							13 & 21
Beurré Superfin								8.5										14
Calebasse M. Chas. Furst							12.3	9.2										14
Vineland 29014				9.2		8.6		8.6										14
Cayuga						10.7		10.6										14
Comte de Lamy								11.9										14
Hood								10.0										14
Michigan #235						9.6	8.6	8.6										14
Michigan #437							12.5	12.1										14
Michigan #550							15.0	14.4										14
Michigan #572						11.5	10.5	10.9										14
Old Home								8.5										14
Canada 25141						9.8	12.6	9.5										14
Beurre Bosc							12.9	12.7	12.4	11.8								15 & 21
Michigan #504						10.8		9.1										15
Laxton's Wonderful						11.3												16
Michigan #592								10.1										16

TABLE 10.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest. 1955. Wooster, Ohio—Continued

Variety	Pressure Test (lbs.) at Dates Indicated																	Harvest dates
	August				September								October					
	15	22	24	29	2	7	9	14	16	19	21	30	3	7	10	19	24	
Beurre d'Anjou										11.2								20
Canner										12.4								20
Conference							12.6			10.3								20
Josephine de Malines										11.5								20
Duchesse Helene d'Orleans											12.3							21
Duchesse Georges Boucher								10.7			9.9							22
U.S.D.A. 348204											12.1							22
Pulteney								12.0			10.9							22
Sir Harry Veitch						17.6		15.2			14.3							22
Stanley								11.3			10.9							22
P–12											9.6							23
Shea												11.3						Oct. 1
Le Lectier																		1
Beurre Dumont											10.3	11.2	9.2					3
Duchesse de Bordeaux												10.4	10.5					3
Madame Ernest Baltet												10.3	10.4					3
President Barabe													12.0					3
Baldwin								13.2			13.0	12.1		11.5				7
Bayerische Winterbirne												15.9		12.5				7
Beurre Diel														9.1				7
Covert												13.3		11.6				7
Lawrence												13.4		9.5				7
Waite												10.7	9.2	10.2				7
Winter Cole											11.1	11.6		10.8				7
Alexander III													12.5	12.2				10
Beurré Baltet Pere								13.6			13.7	13.2		12.7	12.6		13.0	10 & 25

TABLE 10.—Harvest Dates and Firmness of Fruits of Pear Varieties Prior to and at Time of Harvest—1955. Wooster, Ohio—Concluded

Variety	Pressure Test (lbs.) at Dates Indicated																	Harvest dates
	August				September								October					
	15	22	24	29	2	7	9	14	16	19	21	30	3	7	10	19	24	
Clyde													10.9		11.0			10
Souvenir d'Emile Coue														10.6				10
Vineland 29018															9.6			10
Winter Nelis (Large Strain)														10.2				10
Dana Hovey												14.5		9.7				12
Glou Morceau												14.7		11.0				12
Laxton's Victor												12.3		11.3				12
Christmas Holiday											14.6				14.1	13.9		19
Ovid														14.8	14.3	15.0		19
U.S.D.A. P.I. 170083											13.0	13.5		12.2	12.7	12.0		19
Willard														11.4	11.3	10.5		19
Luisa Invernale													13.8		12.9	13.3		20
Olivier de Serres																17.0		20
Michigan #566											14.5	15.5		14.0		15.1		21
Winter Nelis (Russet Strain)												15.9		14.3		13.5	13.9	24
Campas												11.7		11.3		11.1	10.8	25
Tardive de Ninove												11.8		11.6	11.1	11.5	11.2	25

TABLE 11.—Average Date of Full Bloom and of Harvest Together With Average Length of Growing Season of Various Pear Varieties. Wooster, Ohio

Four to Fourteen Years Records

Variety	Years available	Average date of full bloom	Years available	Average date of harvest	Average number of days between full bloom and harvesting dates
Alexander III	10	May 1	8	Oct. 17	170
Baldwin	4	April 26	4	Oct. 3	160
Bayerische Winterbirne	9	May 1	8	Oct. 12	165
Beurre Diel	10	May 1	7	Oct. 8	161
Beurre Superfin	10	May 1	5	Oct. 1	154
Campas	12	April 29	10	Oct. 20	175
Doyenne du Comice	9	May 2	5	Sept. 25	147
Doyenne Georges Boucher	12	April 30	10	Sept. 26	150
Duchesse de Bordeaux	10	May 1	8	Oct. 8	161
Howell	8	May 1	7	Sept. 26	149
Josephine de Malines	11	April 29	7	Oct. 8	163
Laxton's Progress	14	May 1	9	Sept. 7	130
Laxton's Wonderful	6	April 29	5	Sept. 15	140
Louise Bonne de Jersey	11	April 28	10	Sept. 19	145
Mich. U. S. 437	6	May 1	5	Sept. 27	150
Mich. U. S. 504	14	May 2	11	Sept. 12	134
Mich. U. S. 562	9	May 3	8	Sept. 6	127
Mich. U. S. 566	11	April 30	8	Oct. 15	169
Mich. U. S. 572	13	May 2	9	Sept. 13	135
Mich. U. S. 592	6	May 3	5	Sept. 25	146
Olivier de Serres	8	April 30	3	Oct. 10	164
Patten	8	May 2	8	Sept. 12	134
Philippe Chauveau	8	April 29	6	Aug. 13	107
Richard Peters	8	April 30	4	Sept. 8	132
Robert de Neufville	12	April 30	9	Sept. 6	130
Saint Gilles	12	May 2	8	Sept. 8	130
Stanley	12	April 29	8	Sept. 28	153
Tardive de Ninove	6	May 1	4	Oct. 13	166
Winter Cole	11	May 3	9	Oct. 13	164
Worden Seckel	11	April 29	10	Sept. 14	135

TABLE 12.—Average Date of Full Bloom and of Harvest Together With Average Length of Growing Season of Various Pear Varieties, 1938-1955. Wooster, Ohio

Variety	Average date of		Average number of days between full bloom and harvesting dates
	Full bloom	Harvest	
Bartlett	May 1	Sept. 1	124
Bartlett (Russet Strain)	April 30	Sept. 6	130
Beierschmitt	May 1	Aug. 30	122
Beurré Bosc	May 2	Sept. 27	149
Beurré d'Anjou	April 29	Sept. 28	153
Cayuga	April 30	Sept. 17	141
Clapp Favorite	May 2	Aug. 22	113
Clyde	May 1	Oct. 5	158
Canner	May 3	Sept. 26	147
Conference	May 2	Sept. 18	140
Cope's Seedless	April 30	Sept. 11	135
Covert	May 1	Oct. 8	161
Dana Hovey	May 1	Oct. 10	163
Duchesse d' Angoulemo	May 1	Sept. 17	140
Ewart	May 1	Sept. 15	138
Flemish Beauty	April 27	Sept. 14	141
Gorham	May 3	Sept. 9	130
Howell	May 3	Sept. 23	144
Kieffer	April 28	Oct. 17	173
Lawrence	May 1	Oct. 7	160
Laxton's Superb	May 1	Aug. 18	110
Lincoln	April 30	Sept. 1	125
Maxine	April 30	Aug. 28	121
Ovid	April 30	Oct. 16	170
Pulteney	May 2	Sept. 19	141
Seckel	April 30	Sept. 12	136
Shea	May 2	Sept. 22	144
Tyson	April 29	Aug. 18	112
Waite	May 1	Oct. 3	156
Willard	May 1	Oct. 15	168
Winter Nelis (Russet Strain)	May 3	Oct. 18	169

In respect to harvesting, the earliest varieties preceded Bartlett in the following order: Philippe Chauveau, Laxton's Superb, Tyson, Clapp Favorite, Maxine and Beierschmitt. Data in Tables 7, 9, and 10 indicate that Early Seckel should also be included in this list. Varieties harvested latest of all began with Tardive de Ninove, followed by Willard, Ovid, Kieffer, Alexander III, Winter Nelis and finally Campas. On the other hand, considered from the point of view of length of growing season, Ovid, Alexander III, Kieffer and Campas, in that order, ranged from 170 to 175 days.

It is interesting to note that the period of harvest extending from Maxine to Winter Nelis which was used to compare the data in Tables 2 to 9 represented an average of 51 days. But from the earliest harvested Philippe Chauveau to the final Campas the over-all average harvest period was 68 days, which is the difference between the longest growing season of 175 days and the shortest of 107.

Keeping Quality

The material presented in connection with this aspect is admittedly fragmentary and inadequate. The information was obtained following removal of fruits from an air-cooled storage held at 34 to 36 degrees fahrenheit up to and including January 1. Following removal from storage the fruits were allowed to soften at a room temperature of from 65 to 75 degrees. Under such conditions some varieties produced fruits which were of reasonably good flavor while others were unsatisfactory. It is obvious that this aspect of the evaluation requires much more precise attention than is possible within the scope of this publication.

General Notes

Material presented under this heading is likewise fragmentary. Unless otherwise indicated it is necessarily based on behavior of fruits under Wooster conditions. Thus the conclusions must be considered purely tentative in regard to other locations. Reports here presented may vary considerably from available reports of the same variety in another state. For example the varieties Covert, Ovid, Willard and Waite have never ripened satisfactorily in any season in Wooster. Apparently these varieties are not adapted to northern Ohio conditions where growing season temperatures are higher than those in New York. Other examples might be given to illustrate this point.

ALEXANDER III

Synonyms: Alessandro III, Alexandre III
Origin: unknown
Source: U.S.D.A. from G. Giannini, Pistoia, Italy, under name Alessandro III as P. I. 104746, 3/20/34; from U.S.D.A. in 1941
Description:
Baltet Nursery Catalog 1935-36; Giannini Nursery Catalog 1938-39
Kobel, F. 1953. **Lehrbuch des Obstbaus auf Physiologische Grundlage** Julius Springer. Berlin
Fruit characteristics: (Figure 25)
Size: large
Shape: roundish, truncate, no neck, surface somewhat roughened
Color: yellow-green, some blush on cheeks, overspread unevenly with russet
Flesh: white, firm, coarse, tough, medium dry, subacid; stone cells scarce, not objectionable, confined to core region
Flavor. poor to fair
Harvest date: 2nd to 3rd week of October
Keeping quality: unknown
General notes: First observed at Wooster in 1950 and has never ripened properly. Has shriveled without softening regardless of harvest date and despite proper ripening temperature.

AMRUD

Synonyms: None
Origin: Afghanistan as Olmo 553
Source: U.S.D.A. from Afghanistan as P. I. No. 171159; from U.S.D.A. in 1953
Description:
None available
Fruit characteristics. (Figure 8)
Size: medium
Shape: ovate to pyriform, neck obscure
Color: yellow-green, sometimes blushed with red
Flesh: white to yellow, firm, coarse, unpleasantly sweet; stone cells abundant, confined to core region
Flavor: poor
Harvest date: fourth week of August
Keeping quality: a few days only
General notes: An early pear harvested prior to Bartlett. Sweetness unpleasant to taste.

BALDWIN

Synonym: none
Origin: Unknown, presumed to have originated in Baldwin County, Alabama
Source: Received in 1947 from U.S.D.A
Description:
None available

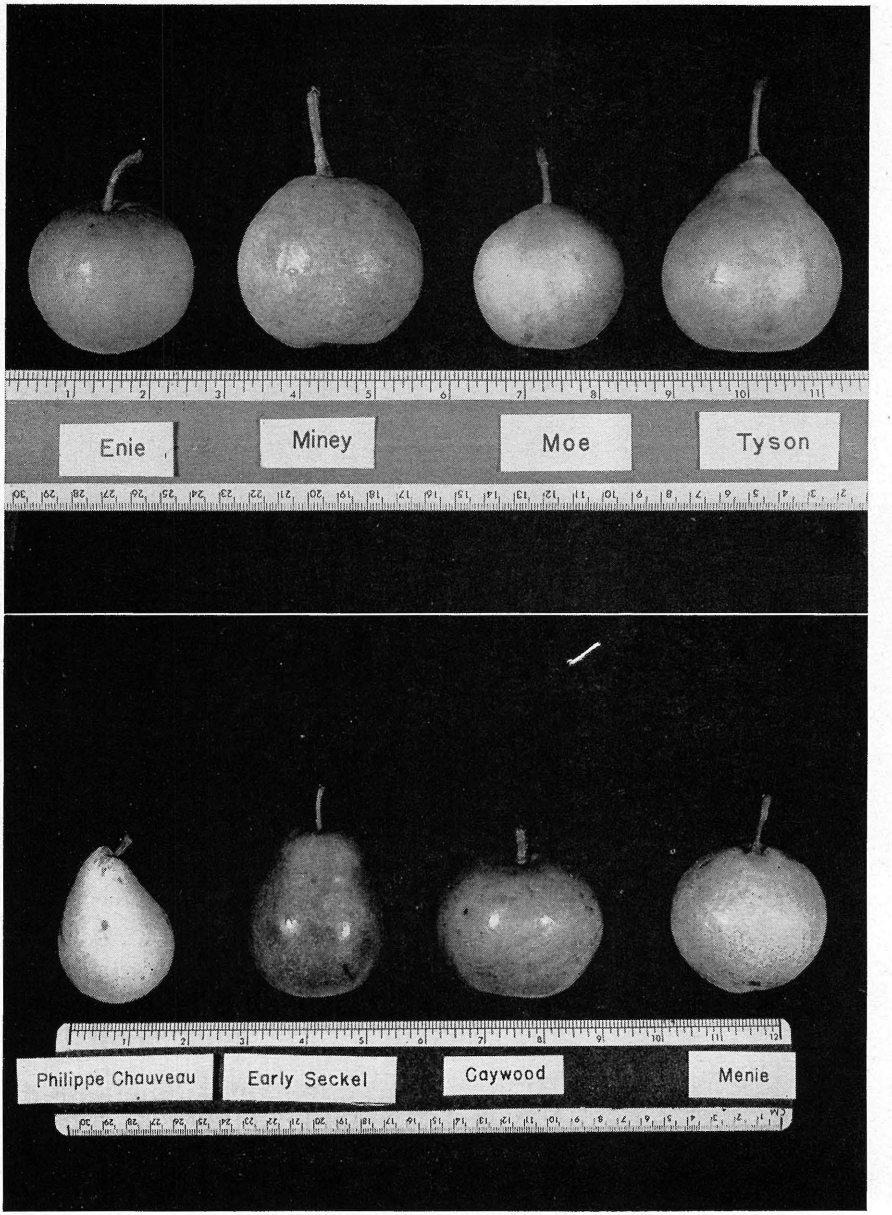
Enie
Miney
Moe
Tyson
Philippe Chauveau
Early Seckel
Caywood
Menie

Fig. 6

Fruit characteristics: (Figure 19)
Size: medium
Shape: oval to obovate pyriform, occasionally diamond shaped, obscure neck
Color: greenish-yellow, dull, roughened skin, somewhat similar to Kieffer
Flesh: yellow, soft, juicy, tender, subacid; stone cells confined to core region, not objectionable
Flavor: fair to good
Harvest date: first week in October
Keeping quality: relatively short for a variety of Oriental type
General notes: Appears to be an Oriental hybrid with flavor somewhat superior to most varieties of similar inheritance. Reported outstandingly blight resistant and very productive (Georgia)

BANTAM

Synonym: Minnesota 3
Origin: Seedling of unknown origin produced by University of Minnesota Fruit Breeding Farm. Introduced commercially in 1940.
Source: Andrews Nurseries, Faribault, Minn., 1938
Description.
Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 117
Leslie, W. R. 1951. Tree Fruits Grown in Prairie Orchards. Dom. Can. Farmers Bul. 135
Minnesota Horticulturist 1940. Vol. 68 (3), page 45
Turnquist, Orrin C. and Leon Snyder. 1955. Fruit Varieties for Minnesota. Minn. Agr. Ext. Serv. Bul. 224
Fruit characteristics: (Figure 17)
Size: small
Shape: roundish, oval, somewhat flattened
Color: yellow, red blush on most specimens
Flesh: yellow, firm, granular, tender, juicy; stone cells scarce, confined to basin area
Flavor: poor to fair
Harvest date: last week of August
Keeping quality: softens rapidly, short season
General notes: Size and dessert quality in Ohio unsatisfactory from commercial viewpoint. Reported to be hardy and very resistant to fire blight (Minnesota).

BARTLETT

Synonyms: Williams Christ, Williams, Williams Christbirne, Williams' Bon Chretien, Buoncristiana Williams
Origin: Seedling found at Aldermaston, Berkshire, England. Introduced into America in late 18th century
Source: Cole Nursery Company, Painesville, Ohio; Greening Nursery Company, Monroe, Michigan (Nicol strain)

Description:

Hedrick, U. P. 1921. **Pears of New York.** Page 124. (See also for list of earlier citations, 1845 to 1921)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co., New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 267-68

Fruit characteristics: (Figure 9)

Size: large

Shape: obovate, obtuse pyriform

Color: yellow, occasionally blushed

Flesh: yellow, firm, soft, medium fine to buttery, melting, juicy, subacid; stone cells absent

Flavor: very good to excellent

Harvest date: September first

Keeping quality: good for short time, possibly one month at 32° F.

General notes: Very susceptible to fire blight. Does very well at Wooster and recommended as principal variety for commercial use in Ohio and pear growing areas of the United States. Several mutations including Large Bartlett and Russet Bartlett (Figure 10) are also known.

BARTLETT (STRIPED STRAIN)

Source: A. D. Shamel, Riverside, California, in 1935 as PR-19-B

Fruit characteristics: (Figure 10)

Similar to Bartlett with exception of parallel stripes of light and dark green which occur during growing season on fruit from stem to basin. These green stripes disappear after fruit is harvested. Very susceptible to fire blight.

BAYERISCHE WINTERBIRNE

Synonyms: none

Origin: unknown

Source: U.S.D.A. from P. W. Werner, Reichelsheim (Odenwald) Germany 1/3/38 as P. I. 125736; from U.S.D.A. 1941

Description:

Werner Nursery Catalog, 1937-38

Fruit characteristics: (Figure 25)

Size: medium to small

Shape: acute obovate pyriform, slight neck

Color: greenish-yellow, occasionally slight russeting

Flesh: yellow, soft, fine, tender, juicy, sweet to subacid; stone cells moderate, may be objectionable

Flavor: fair

Keeping quality:unknown

General notes: Tendency to drop badly, fruit not particularly attractive, late harvested variety, questionable commercial value.

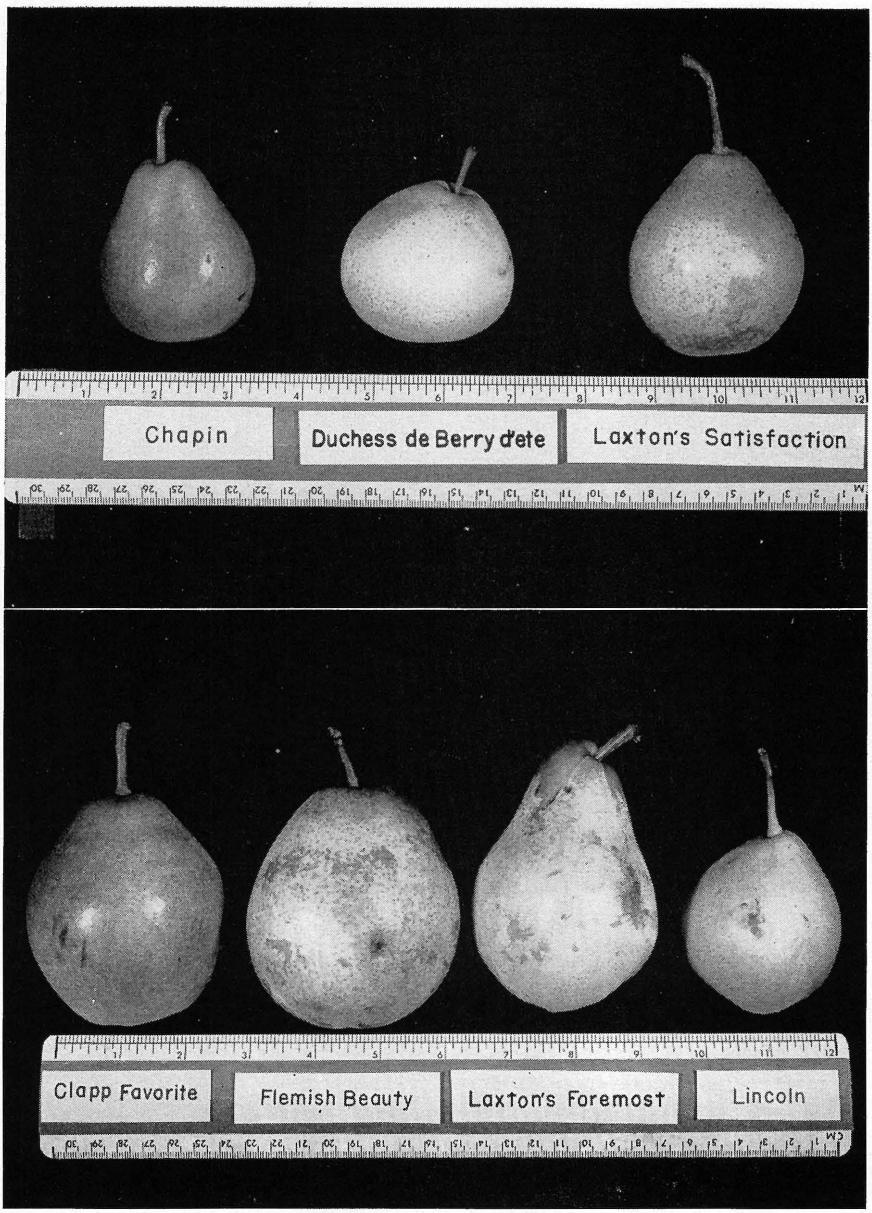
Chapin
Duchess de Berry d'ete
Laxton's Satisfaction
Clapp Favorite
Flemish Beauty
Laxton's Foremost
Lincoln

Fig. 7

BEIERSCHMITT

Synonyms: none
Origin: Originated in northeastern Iowa as Bartlett seedling
Source: Iowa Agricultural Experiment Station, 1936
Description:
Howlett, F. S. 1940. Horticulture at the Ohio Agricultural Experiment Station. Ohio Agr. Exp. Sta. Spec. Circ. 60.
Leaflet of J. A. Beierschmitt, originator, Fairbank, Iowa
New York State Fruit Testing Association Catalog, 1956-57
Fruit characteristics: (Figure 9)
Size: medium
Shape: roundish, obovate
Surface of fruit: uneven
Color: yellow green with red blush, occasionally a light smooth russet over a portion of the fruit
Flesh: white to yellow, firm, medium to fine texture, crisp, tender, melting, juicy, sweet to subacid; stone cells absent
Flavor: good to very good
Harvest date: first week in September, slightly later than Bartlett
Keeping quality: reasonably good for several weeks
General notes: Fruits fairly attractive but show surface injury rather readily. Dessert quality very satisfactory. One of better varieties on trial at Wooster but unfortunately coincides with Bartlett in harvesting season. Variety does not blight as badly as Bartlett and reported to possess considerable resistance to low temperature (Iowa). Recommended as pollinizer for Bartlett in Ohio and for limited commercial planting.

BERERD

Synonyms: none
Origin: unknown
Source: U.S.D.A. as P. I. 175387: from U.S.D.A. in 1952
Description:
None available
Fruit characteristics: (Figure 21)
Size: large
Shape: turbinate, obovate
Color: yellow, covered with fine russet
Flesh: yellow, soft, medium buttery, tender, melting, sweet: stone cells absent
Flavor: good
Harvest date: first week of October
General notes: Attractive fruit, good size, will bear watching.

BERERD X 10918

Synonyms: none
Origin: unknown, possibly a seedling of Duchesse Bérerd
Source: U.S.D.A. as P. I. 179150 from Lepage, Angers, France; from U.S.D.A. 1953

Description:
None available
Fruit characteristics: (Figure 19)
Size: small
Shape: round, flattened, apple-shaped, very pronounced cavity
Color: greenish-yellow
Flesh: white, firm, medium fine, crisp, tender, juicy, subacid; stone cells scarce, confined to core region
Flavor: poor
Harvest date: last week in August

General notes: Seedling with some Oriental species characteristics, unattractive and no commercial value.

BEURRÉ BALTET PÈRE

Synonyms: none
Origin: Raised and introduced by Baltet Frères, Troyes, France, about 1865
Source: U.S.D.A. frorm Pépinières Baltet, Troyes (Aube), France, 2/25/38 as P. I. 127381; from U.S.D.A. 10/14/39
Description:
Hedrick, U. P. 1921. **Pears of New York.** Page 286. (See also for list of earlier citations, 1876-1889)
Simon-Louis Frères. 1895. **Guide Pratique de l'amateur de Fruits.** Page 61
Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray, London
Baltet Nursery Catalog. 1935-36
Fruit characteristics: (Figure 19)
Size: large
Shape: acute obovate, pyriform to turbinate
Color: yellow-green, occasionally blushed
Flesh: white to yellow, soft, very fine, tender, buttery, medium juicy, sweet to subacid; stone cells scarce, confined to core region
Flavor: fair
Harvest date: first to second week in October
Keeping quality: holds reasonably well

General notes: Quite attractive but considerable variability in size and shape. Flavor inferior to European reports. Very susceptible to fire blight.

BEURRÉ BOSC

Synonyms: Bosc, Bosc's Flaschenbirne, Bosc's Butterbirne, Calabasse Bosc, Imperatore Alessandro, Beurré d'Apremont, Kaiser-Alexander-Birne, Kaiserbirne
Origin: Raised from seed in 1807 by Van Mons of Louvain, Belgium
Source: Storrs and Harrison Nurseries, Painesville, Ohio in 1932

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 130-131. (See also for list of earlier citations, 1832-1906)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Fruit characteristics: (Figure 14)

Size: above medium to large
Shape: acute obovate pyriform, distinct neck
Color: attractive yellow, overspread with fine russet
Flesh: yellow, soft, fine, buttery, tender, melting, juicy, sweet; stone cells scarce, confined to core region
Flavor: very good to excellent
Harvest date: last week in September
Keeping quality: good, several months at 32° F.

General notes: Variety very susceptible to fire blight. One of best flavored varieties on trial at Wooster. Harvest season three weeks later than Bartlett. Holds well in storage if fruits are protected from attacks of disease-producing organisms. Must be harvested at proper pressure test (Ohio 13 lbs. minimum) to eliminate core breakdown.

BEURRÉ D' ANJOU

Synonyms: Anjou; Nec plus Ultra Meuris, Miel d'hiver, Winter Meuris

Origin: French variety of obscure origin presumably; however, a seedling of Van Mons

Source: Bountiful Ridge Nurseries, Princess Anne, Md. 1937

Description:

Hedrick, U. P. 1921. **Pears of New York.** Page 127. (See also for list of earlier citations 1841-1921)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrès Pomologique.** B. Arnaud, Lyon, France. Page 333

Fruit characteristics:

Size: large
Shape: obovate pyriform, sides slightly unequal, obscure neck
Color: yellow-green, occasionally light russet usually around basin
Flesh: white to yellow, tender, juicy, subacid; stone cells scarce
Flavor: very good
Harvest date: fourth week of September
Keeping quality: good

General notes: Unsatisfactory yield at Wooster. Quality somewhat variable. Fruits in Ohio usually lack attractiveness of those produced on West Coast. Has shown somewhat greater blight resistance than Bartlett. Rather widespread reputation for light bearing.

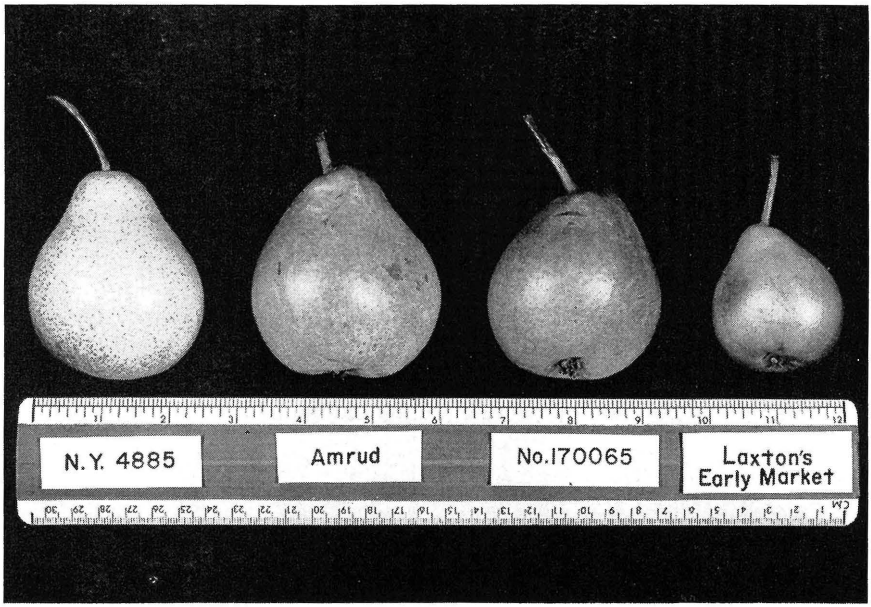

Fig. 8

BEURRÉ d'ARENBERG (P. I. 105138)

Source: U.S.D.A. from Martino Bianchi, Pistoia, Italy, 4/2/34, under name Butirra d' Aremberg. P. I. 105138; from U.S.D.A. 1940

Description indicates that as suggested by U.S.D.A. this introduction is **Glou Morceau,** synonyms Beurré d' Hardenpont, Hardenpont's Winterbutterbirne. These two varieties have been frequently confused in European literature.

BEURRÉ DIEL

Synonyms: Diel, Diel's Butterbirne, Beurré Royal, Beurré Incomparable, Beurré de Trois—Tours, Beurré Magnifique, Belle Magnifique, Melon, Beurré Vert

Origin: Chance seedling found about 1800 near Vilvorde, Belgium

Source: U.S.D.A. from Martino Bianchi, Pistoia, Italy, 5/2/34 under name Butirra Diel as P. I. 105139; from U.S.D.A. 1940 and 1942

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York**. Pages 133-134. (See also for list of earlier citations, 1828-1895)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Catalogue Descriptif Congrĕs Pomologique. 1927. Pages 205-206

Baltet Nursery Catalog. 1935-36; P. Lecolier Nursery Catalog. 1935-36

Kessler, H. 1949. **Pomologie Illustrée.** Berne, Switzerland

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrès Pomologique.** B. Arnaud, Lyon, France. Page 250-251

Bianchi Nursery Catalog. 1955-56

Fruit characteristics: (Figure 18)

Size: large

Shape: obovate acute pyriform, practically no neck as grown at Wooster

Color: greenish-yellow to yellow

Flesh: yellow, firm, medium texture, juicy, sweet to subacid; stone cells, beneath skin and scattered through flesh, usually somewhat objectionable

Flavor: fair

Harvest date: second week in October

Keeping quality: fair, will hold into December and possibly later

General notes: Old variety widely grown in Europe. Fruits only fair flavor as grown at Wooster. Color somewhat resembles Howell. Certainly not adapted to Ohio conditions.

BEURRÉ DUMONT

Synonyms: none

Origin: Seedling found in Belgium, first bearing fruit in 1833

Source: U.S.D.A. from F. Delaunay, Angers, France, 4/7/39 as P. I. 132484; from New York State Fruit Testing Association, Geneva, New York, in 1942

Description:

Bunyard, Edward A. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Page 293. (See also for list of earlier citations)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Delaunay Nursery Catalog. 1938-39

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrĕs Pomologique.** B. Arnaud, Lyon, France. Page 2565

New York State Fruit Testing Assoc. Catalog, 1956-57

Fruit characteristics: (Figure 18)

Size: medium

Shape: ovate to obovate pyriform

Color: greenish-yellow, occasionally overspread with fine russet

Flesh: yellow, soft, fine, tender, juicy, sweet; stone cells largely confined to core region, not objectionable
Flavor: good to very good
Harvest date: Second week in October
Keeping quality: good

General notes: One of best flavored varieties on trial at Wooster. Only fairly attractive, size medium. Worthy of limited trial for roadside and farm markets. Presumably quite susceptible to fire blight.

BEURRÉ SUPERFIN

Synonyms: Superfin, Hochfeine Butterbirne
Origin: Seedling raised near Angers, France from seeds sown in 1837. Variety first bore in 1844 and introduced to trade in 1846
Source: U.S.D.A. as P. I. 104754 from Viveros Manuel San Juan, Sabinan, Zaragoza Province, Spain. 5/4/34 as Beurré Superfina; from U.S.D.A. 1942
Description:
Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London
Hedrick, U. P. 1921. **Pears of New York.** Pages 137-138. (See also for list of earlier citations, 1854-1894)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York
P. Lecolier Catalog 1935-36.
Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrĕs Pomologique.** B. Arnaud, Lyon, France. Page 262-263
Fruit characteristics: (Figure 15)
Size: medium to large
Shape: obovate pyriform, with obscure neck, flesh tapering into stem, lipped
Color: greenish-yellow with red blush on best specimens, occasionally light smooth russet over some specimens
Flesh: white to yellow, soft, fine, buttery, melting, very juicy, subacid, vinous flavor; stone cells absent
Flavor: good
Harvest date: last week in September to first week in October
Keeping quality: fair

General notes: Variety widely grown in Europe over many years; fruits appear to vary considerably from season to season. Quality certainly good when properly ripened. Not as attractive as desired.

BONNE de BEUGNY

Synonyms: none
Origin: Chance seedling found at St. Catherine-de-Fier-Bois, France, in 1875
Source: U.S.D.A. from Martino Bianchi, Pistoia, Italy, 1/8/34 as P. I. 104041; from U.S.D.A. in 1947

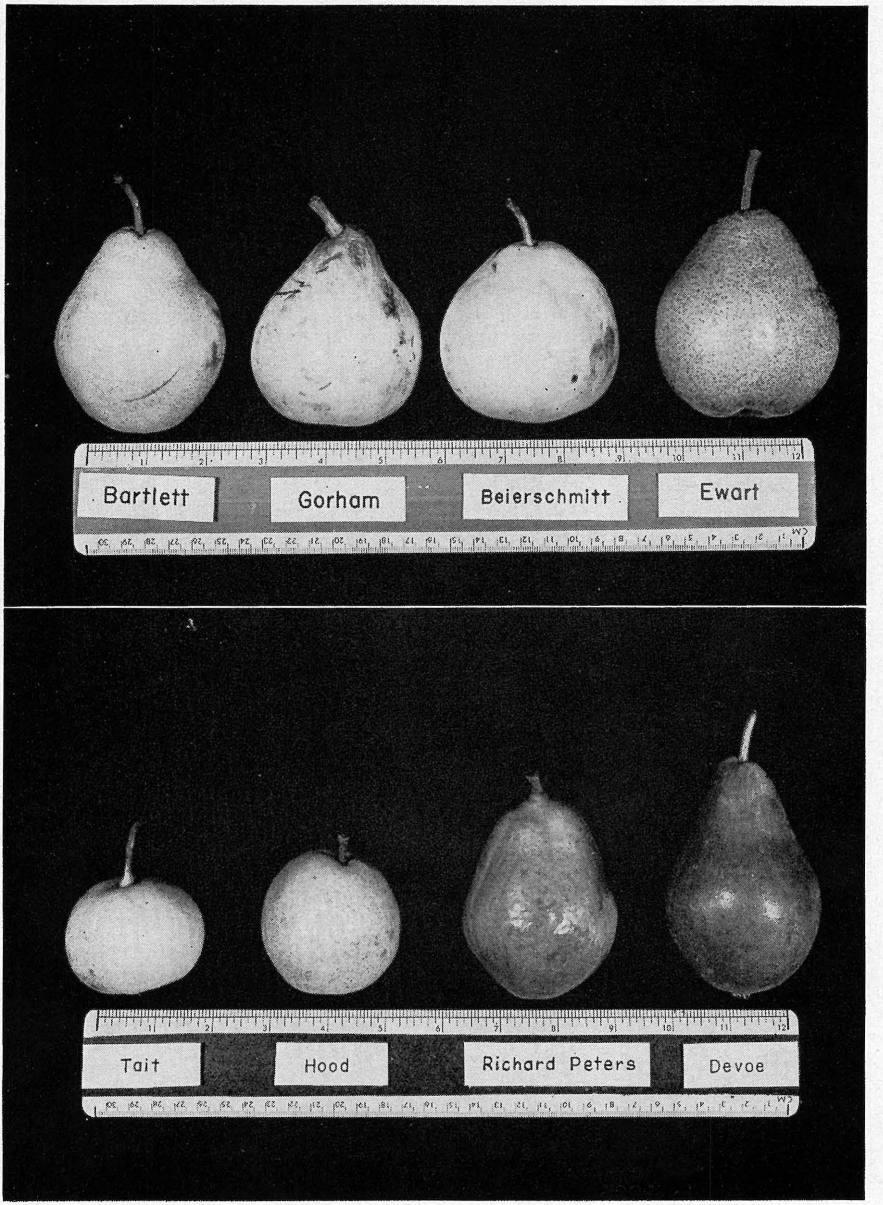
Bartlett
Gorham
Beierschmitt
Ewart
Tait
Hood
Richard Peters
Devoe

Fig. 9

Description:

Hedrick, U. P. 1921. **Pears of New York.** Page 316. (See also for earlier citations, 1911)

Garnier, Max. 1917. Bonne de Beugny. Rev. Hort. 83:280

Cataloque Descriptif Congrĕs Pomologique. 1927. Page 228

Bianchi Nursery Catalog. 1932-33

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 269

Fruit characteristics: (Figure 25)

Size: small to medium

Shape: roundish, globular

Color: yellow with some russet in spots

Harvest date: October

General notes: Flesh characteristics not yet available at Wooster. Reported to be juicy, sweet and of good to very good flavor (France).

CALEBASSE MADAME CHARLES FURST

Synonyms: none

Origin: Baltet Frères, France

Source: U.S.D.A. from Pépinières Baltet, 2/25/38 as P. I. 127383; from U.S.D.A., 1939

Description:

Baltet Nursery Catalog. 1935-36

Fruit characteristics: (Figure 20)

Size: large

Shape: obovate pyriform, distinct neck

Color: yellow, frequently blushed with red. Some russeting over surface in patches

Flesh: yellow, soft, medium to fine, tender, medium dry, sub-acid, slightly granular; stone cells scarce, not objectionable

Flavor: fair

Harvest date: second to third week in September

Keeping quality: holds well for only short time

General notes: Variety seems to have few outstanding characteristics. Not particularly attractive. Very susceptible to fire blight at Wooster.

CAMPAS

Synonyms: none

Origin: Obtained in 1923 by U.S.D.A. as bud from tree growing on the Martin Campas property, St. Petersburg, Florida

Source: South Haven Experiment Station, South Haven, Michigan in 1936

Description:

Gould, H. P. and Stanley Johnston. 1935. The Campas Pear. Mich. Quart. Bul. 17(3). 155-157.

Greening Nursery Catalog. 1955-56

Fruit characteristics: (Figure 25)

Size: medium

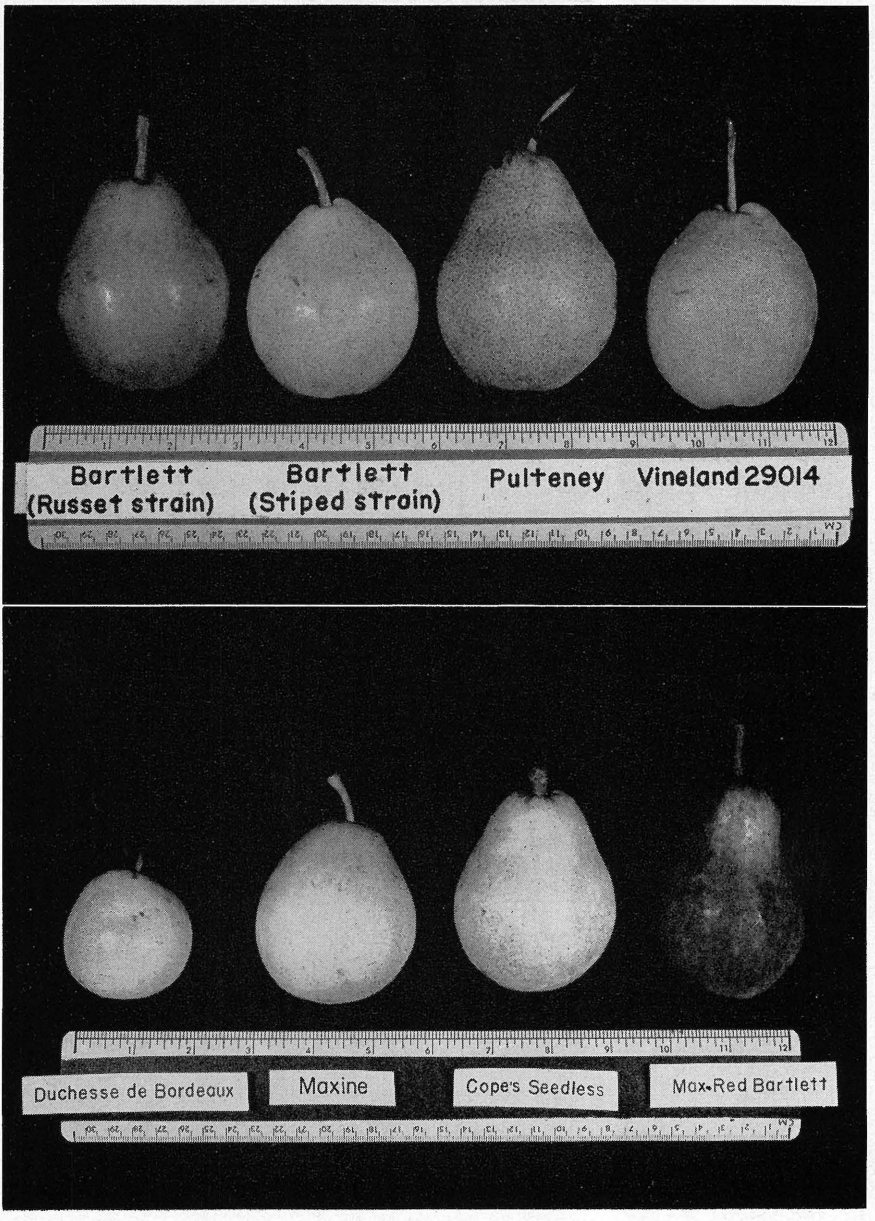
Bartlett (Russet strain)
Bartlett (Stiped strain)
Pulteney
Vineland 29014
Duchesse de Bordeaux
Maxine
Cope's Seedless
Max-Red Bartlett

Fig. 10

Shape: oval, diamond-shaped, resembles Kieffer
Color: greenish-yellow to yellow, occasionally blushed with red
Flesh: yellow, firm to hard, coarse, crisp to tough, juicy, subacid to sour; stone cells abundant, objectionable
Flavor: poor, similar to Kieffer
Harvest date: third week in October
Keeping quality: good, similar to Kieffer

General notes: Similar to Kieffer in most respects. Difficult to ripen properly at Wooster. Reported to be highly resistant to fire blight.

CANADA (VINELAND) 25141

Synonyms: none
Origin: Seedling of No. 142623 (Seckel × Kieffer) originated at Horticultural Experiment Station, Vineland, Ontario
Source: Horticultural Experiment Station, Vineland, Ontario, 1949
Description:
Dickson, G. H. Pear Breeding 1913-1952. Hort. Exp. Sta. and Products Laboratory. Report 1951 and 1952. Ontario Dept. Agr. Pages 31-37
Fruit characteristics: (Figure 13)
Size: above medium to large
Shape: oblong acute pyriform
Color: yellow covered almost entirely with fine smooth russet bronze red cheek
Flesh: yellow, soft, fine, buttery, tender, juicy, sweet to subacid; stone cells scarce
Flavor: good
Harvest date: second week in September

General notes: Good quality, one of the largest of Seckel types. Flavor not as sweet as Seckel. Week to 10 days after Bartlett. Should have trial for limited commercial use.

CANNER

Synonyms: none
Origin: unknown, but possibly Kieffer seedling
Source: unknown
Description: none available
Fruit characteristics: (Figure 15)
Size: medium
Shape: obovate obtuse pyriform
Color: yellowish-green
Flesh: yellowish-green, firm, coarse, tough, juicy, subacid; stone cells abundant, objectionable
Flavor: poor
Harvest date: fourth week in September
Keeping quality: apparently will hold some time in storage

General notes: Has been difficult to ripen satisfactorily at Wooster. Rough, unattractive appearance. Oriental inheritance and somewhat similar to Campas and Kieffer in flavor.

CAYUGA

Synonyms: none

Origin: Open pollinated seedling of Seckel. Introduced in 1920

Source: New York State Fruit Testing Association, Geneva, New York, 1923

Description:

Hedrick, U. P. 1923. New or Noteworthy Fruits VI. N. Y. Agr. Exp. Sta. Bul. 497

New York State Fruit Testing Association Catalog. 1956-57

Fruit characteristics: (Figure 20)

Size: medium to large

Shape: obovate obtuse pyriform

Color: greenish-yellow, occasionally almost completely covered with red blush

Flesh: yellow, firm, medium tough, juicy, aromatic, sweet: stone cells scarce, confined to core region

Flavor: good to very good

Harvest date: third week in September

Keeping quality: fair

General notes: Attractive fruits. Good flavor when properly grown but occasionally difficult to ripen at Wooster. Considerable blight resistance.

CAYWOOD

Synonyms: none

Origin: Open pollinated seedling of Seckel originated by New York Agricultural Experiment Station. Introduced formally in 1938

Source: New York Agricultural Experiment Station, 1939

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 117

New York State Fruit Testing Association Catalog. 1956-57

Fruit characteristics: (Figure 6)

Size: small to medium

Shape: round, occasionally somewhat obovate

Color: greenish-yellow, blushed with red resembling Seckel, fine-grained russet over surface

Flesh: white to yellow, soft, fine, buttery, juicy, melting, sweet, resembles Seckel; stone cells absent

Flavor: good

Harvest date: second to third week in September

Keeping quality: good

General notes: Resembles Seckel in several characteristics but usually somewhat larger. One of better varieties originating from Seckel.

CHAPIN

Synonyms: none

Origin: Open pollinated seedling of Seckel produced by New York Agricultural Experiment Station, Geneva, New York. Introduced commercially in 1945

Source: New York State Fruit Testing Association, Geneva, New York. 1952

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 117

New York State Fruit Testing Association Catalog. 1956-57

Fruit characteristics: (Figure 7)

Size: small

Shape: obovate pyriform, resembles Seckel but possibly with more prominent neck

Color: greenish-yellow, red covering one-half to three-fourths of surface of fruit, attractive, less russeting than Seckel

Flesh: yellow, firm to soft, medium texture, tender, juicy, sweet; stone cells not objectionable, confined to core region

Flavor: good

Harvest date: second to third week in August, slightly ahead of Early Seckel

Keeping quality: short, ripens quickly

General notes: Variety resembled parent in several characteristics. Early and very short season.

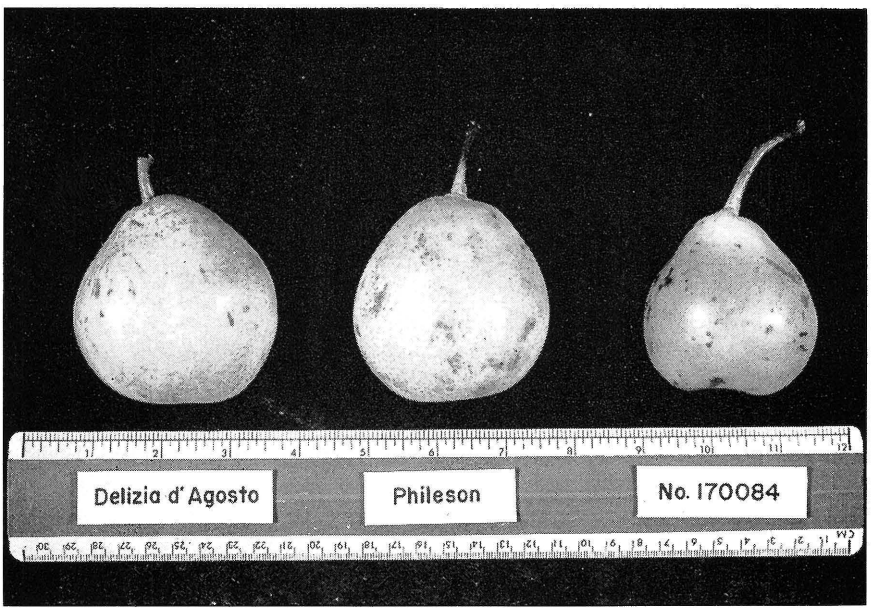

Fig. 11

CHARLES COGNÉE

Synonyms: Cognée

Origin: Introduced by Baltet Frères, Troyes, France in 1879

Source: U.S.D.A. from Martino Bianchi, Pistoia, Italy, 1/8/34 as P. I. 104047; from U.S.D.A. 1941

Description:

Simon Louis Frères, 1895. Guide Pratique de' l' amateur de Fruits. Page 53

Baltet, Charles, 1879. Revue Hort. Page 331-332

Mathieu, C. 1891. Die Birne Charles Cognée. Gartenflora 40:537-538

Baltet, Charles. 1891. Charles Cognée. Bul. d'Arborie (Belgium):65-66

Cusin. 1901. Revue Hort. Page 568

Hedrick, U. P. 1921. **Pears of New York.** Page 334. (See also for earlier citations 1904-1908)

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 274

Piante Mati Nursery Catalog, 1955-56

Fruit characteristics: (Figure 20)

Size: medium

Shape: turbinate to obtuse pyriform, distinct neck

Color: greenish-yellow, becoming yellow

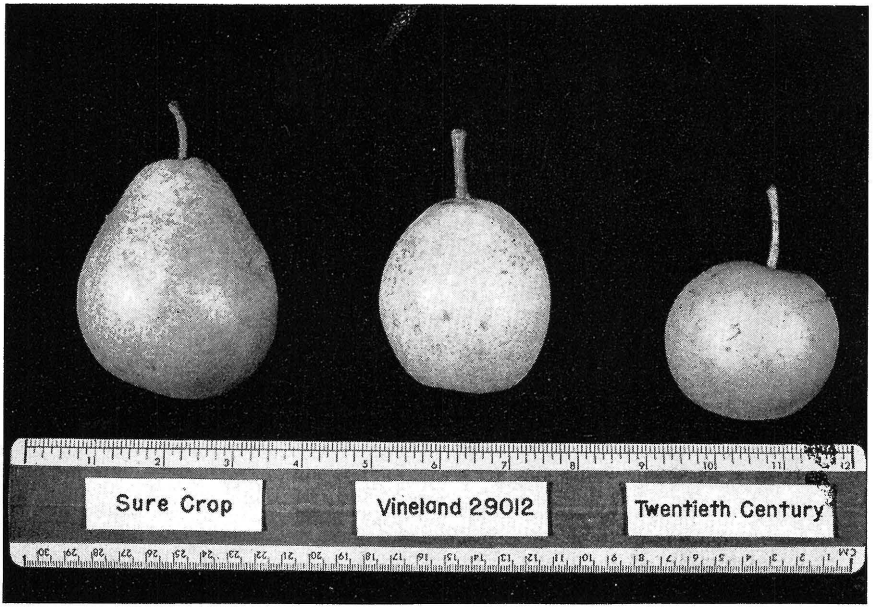

Fig. 12

Flesh: white to yellow, firm, medium, tough, medium juicy, sweet to subacid; stone cells confined to core region, not objectionable
Flavor: fair
Harvest date: second week in October
Keeping quality: will keep well into January

General notes: Earlier descriptions of flavor and quality more favorable than experience at Wooster would warrant. Quite susceptible to fire blight.

CHARLES ESCAIG

Synonyms: none
Origin: Introduced by Baltet Nurseries, Troyes, France in 1933
Source: U.S.D.A. received 12/23/38 from Baltet Frères as P. I. 131123; from U.S.D.A. in 1942
Description:
Baltet Frères Nursery Catalog, 1935-36
Fruit characteristics: (Figure 25)
Size: medium
Shape: roundish, flattened, irregularly shaped
Color: greenish-yellow, often completely covered with russet, may be blushed with red
Flesh: color variable, soft, medium, granular, tender, juicy, sweet; stone cells scarce, confined to core region
Flavor: fair to good
Harvest date: second week in October
Keeping quality: fairly good

General notes: Late harvested variety. Fairly attractive. Should have further observation.

CHRISTMAS HOLIDAY

Synonyms: Burbank's Holiday
Origin: Originated by Luther Burbank in Sebastopol, California. Introduced commercially in 1940 by Stark Bros. Nurseries and Orchards Co. Parentage unknown.
Source: Stark Bros. Nurseries and Orchards Co. Louisiana, Missouri in 1941
Description:
Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 118
Fruit characteristics: (Figure 25)
Size: large
Shape: acute pyriform with long distinct neck, somewhat resembling Bosc
Color: green with red blush, occasionally some russet
Flesh: white to yellow, soft, medium tender, juicy, subacid; stone cells abundant, somewhat objectionable, major number in core region

Flavor: poor to fair
Harvest date: second to third week of October

General notes: Late harvested, flavor not sufficiently satisfactory. Pronounced neck unattractive. Would seem to have little commercial value.

CLAPP FAVORITE

Synonyms: Clapp's Liebling, Clapp's Favorite, Favorite de Clapp

Origin: Raised by Thaddeus Clapp, Dorchester, Massachusetts, but date unknown

Source: Bountiful Ridge Nurseries, Princess Anne, Maryland in 1937

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray, London

Hedrick, U. P. 1921. **Pears of New York.** Pages 142-143. (See also for list of earlier citations—1860-1904)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 278

Fruit characteristics: (Figure 7)
Size: large
Shape: obovate obtuse pyriform
Color: yellowish-green, blushed with red. Attractive.
Flesh: white, soft, buttery, tender, juicy, sweet to subacid; stone cells absent
Flavor: good to very good
Harvest date: third week in August

Keeping quality: softens very quickly

General notes: Highly flavored fruits harvested week to 10 days preceding Bartlett. Softens quickly and has short season. Very susceptible to fire blight.

CLYDE

Synonyms: none

Origin: Open pollinated seedling of Seckel originated by the New York State Agricultural Experiment Station. Introduced for trial in 1932

Source: New York State Fruit Testing Association Geneva, New York in 1939

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 118

Fruit characteristics: (Figure 20)
Size: below medium
Shape: obovate pyriform

Color: dull greenish-yellow, blushed with red, fine russet over considerable portion of surface
Flesh: yellowish-green, soft to firm, medium texture, tender medium dry, sweet to subacid; stone cells not objectionable
Flavor: good
Harvest date: first week in October
Keeping quality: fairly good

General notes: Flavor possibly somewhat inferior to Seckel. Larger than most Seckel seedlings. A late harvested variety. Possibly should be given limited trial for roadside or farm markets.

COMTE DE LAMY

Synonyms: Beurré Curtet, Lamy, Poire Dingler, Curtet's Butterbirne
Origin: Seedling found about 1828 in Joidoigne, Belgium
Source: U.S.D.A. from Clibrans, Ltd., Altringham, England, 12/20/38 as P. I. 131093; from U.S.D.A. in 1952
Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London
Hedrick, U. P. 1921. **Pears of New York.** Pages 184-185. (See also for list of earlier citations, 1841-1908)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York
Simon-Louis Frères. 1895. Guide Pratique de l'amateur de Fruits. Page 230
Catalogue Descriptif Congrés Pomologique. 1927. Page 582
Bunyard and Company Nursery Catalog. 1938-39; Clibrans Nursery Catalog. 1938-39; Laxton Bros. Nursery Catalog. 1938-39, 1955-56

Fruit characteristics: (Figure 14)
Size: small
Shape: roundish obovate to obovate obtuse pyriform
Color: greenish-yellow, blushed with red
Flesh: yellow, soft to medium firm, buttery, tender, medium dry, sweet; stone cells absent
Flavor: fair to good
Harvest date: second week in September

General notes: Small, not particularly attractive. Flavor good when properly ripened.

CONFERENCE

Synonyms: none
Origin: Originated by Thomas Rivers, England, and introduced about 1894
Source: Greening Nursery, Monroe, Michigan, 1936
Description:

Simon-Louis Freres. 1895. Guide Pratique de l'amateur de Fruits. Page 103

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray, London
Hedrick, U. P. 1921. **Pears of New York.** Page 347. (See also for list of earlier citations. 1900-1920)
Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 280
Palmer, E. F. 1946. Fruit Varieties. Ont. Dept. Agr. Bul. 430.
Michigan Quarterly Bulletin. 1926. IX (1):9-13
Kessler, H. 1949. **Pomologie Illustrée.** Berne, Switzerland

Fruit characteristics: (Figure 20)
Size: below medium
Shape: obovate acute pyriform, clubshaped stem, long neck, cavity wanting
Color: yellow-green to greenish-yellow, overspread usually with smooth, dull russet
Flesh: white, soft, fine texture, buttery, tender, melting, sweet to subacid; stone cells absent
Flavor: good to very good
Harvest date: third week of September
Keeping quality: good

General notes: Holds well in storage. Although one of principal English commercial varieties, fruits too small for commercial use in this country. Very productive. Not as attractive as desired.

COPE'S SEEDLESS

Synonyms: none
Origin: Presumably seedling of Bartlett
Source: Cope's Nursery, Salem, Ohio in 1939
Description:
None available
Fruit characteristics: (Figure 10)
Size: large
Shape: obtuse obovate pyriform, similar to Bartlett
Color: greenish-yellow to yellow, resembles Bartlett
Flesh: white to yellow, firm to soft, medium, tender, medium dry, subacid; stone cells absent
Flavor: fair to good, inferior to Bartlett
Harvest date: second week to September
Keeping quality: similar to Bartlett

General notes: Resembles Bartlett in size, shape and color but matures two weeks later. Flavor distinctly inferior to Bartlett Fruits develop seeds in locations where cross pollination occurs.

COVERT

Synonyms: none
Origin: Bartlett × Dorset cross made at New York Agricultural Experiment Station and introduced in 1935
Source: New York State Agricultural Experiment Station in 1938

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Pages 118-119

New York State Fruit Testing Association Catalog. 1956-57

Fruit characteristics: (Figure 23)

Size: large

Shape: obovate obtuse pyriform

Color: yellow-green turning to yellow

Flesh: whitish-yellow, firm, medium tough, medium dry, sweet to subacid; stone cells not objectionable

Flavor: poor to fair

Harvest date: second week in October

General notes: Fruits have not softened properly at Wooster during any year since variety has been on trial. Apparently more suited to areas with lower summer temperatures.

DANA HOVEY

Synonyms: Dana's Hovey, Danas Hovey, Danas No. 16

Origin: Francis Dana of Roxbury, Massachusetts raised several seedlings including Dana Hovey which was introduced about 1854. Supposed to be seedling of Seckel

Source: New York State Fruit Testing Association, Geneva, New York

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Page 146-147. (See also for list of earlier citations, 1853-1910)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

New York State Fruit Testing Association Catalog, 1956-57

Fruit characteristics: (Figure 17)

Size: small to medium

Shape: obovate obtuse pyriform

Color: greenish-yellow becoming golden yellow overspread with fine russet

Flesh: white to yellow, soft, fine, buttery, tender, juicy, sweet; stone cells scarce, confined to core region

Quality: good to very good

Harvest date: second week in October

Keeping quality: holds very well in storage for several months

General notes: sweet, generally very good flavor. Small size of fruits limits commercial value. A good late variety keeping reasonably well. Recommended for the home garden. Relatively free from fire blight.

DELIZIA d' AGOSTO

Synonyms: none

Origin: unknown—Italian variety

Source: U.S.D.A. from Fratelli Ingegnoli, Milan, Italy, March 5, 1934 as P. I. 104539; from U.S.D.A. in 1934

Description:

Ingegnoli Nursery Catalog, 1933

Fruit characteristics: (Figure 11)

Size: above medium to large

Shape: turbinate

Color: greenish-yellow, blushed red on some fruits

Flesh: yellow, soft, medium fine, melting, medium dry, sweet to subacid; stone cells absent

Flavor: fair to poor

Harvest date: first week of September

General notes: Seems to have no outstanding characteristics.

DEVOE

Synonyms: none

Origin: Parentage unknown. Introduced commercially in 1947. Patent No. 728. (March 25, 1947)

Source: Bountiful Ridge Nurseries, Princess Anne, Maryland in 1949

Description:

Bountiful Ridge Nurseries Catalog, 1955-1956

Fruit characteristics: (Figure 9)

Size: medium to above medium

Shape: obovate pyriform, cavity wanting

Color: greenish-yellow becoming often blushed with red over more than one-half of fruit

Flesh: soft, fine, buttery, tender, melting, white to yellow, subacid; stone cells absent

Flavor: fair to good

Harvest date: second week in September, two weeks after Bartlett

Keeping quality: possibly similar to Bartlett. Has not stored well at Wooster

General notes: Red tinged fruits fairly attractive, fair quality, good size. Very susceptible to blight at Wooster.

DOYENNÉ BOUSSOCK

Synonyms: Doyenné Boussoch, Boussock, Beurré de Mérode, Nouvelle Boussoch, Doyenné de Mérode, Doppelte Philippsbirne, Double Philippe

Origin: Presumably raised by Van Mons early in the 19th century

Source: E. D. Smith and Sons Nursery, Winona, Ontario, Canada in 1937

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1922. **Pears of New York.** Pages 152-153 (See also for list of earlier citations, 1841-1894)

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 292

Fruit characteristics: (Figure 18)

Size: medium

Shape: obovate to obovate obtuse pyriform, neck lacking; cavity medium, shallow, obtuse

Color: greenish-yellow occasionally blushed with red, attractive

Flesh: white to yellow, firm, crisp, tender, juicy, sweet to subacid; may have some tannin occasionally and acidity a little too pronounced; stone cells absent

Flavor: fair to good

Harvest date: last week in August, just preceding Bartlett

Keeping quality: short time only

General notes: Although fruits are attractive, other characteristics not sufficiently impressive. Precedes Bartlett by a few days.

DOYENNÉ Du COMICE

Synonyms: Comice, Vereins Dechantsbirne, Buerré Robert

Origin: Seedling raised at Angers, France by Horticultural Society of Main et Loire. Produced first fruit in 1849 and introduced in England in 1858

Source: unknown

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Pages 153-154. (See also for list of earlier citations, 1852-1909)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 295

Kessler H. 1949. **Pomologie Illustrée**, Berne, Switzerland

Fruit characteristics: (Figure 14)

Size: large

Shape: obtuse obovate pyriform

Color: greenish-yellow occasionally covered with considerable russet markings

Flesh: white to yellow, soft, fine, buttery, tender, melting, juicy, sweet to subacid; stone cells absent

Flavor: very good

Harvest date: last week in September to first week in October

Keeping quality: good to very good for variety of this season

General notes: Generally fruits at Wooster not as attractive as those produced in Pacific Northwest. Fruits also somewhat more russeted and coarse appearing. Few varieties possess such superior flavor Reported to be a capricious bearer in the East.

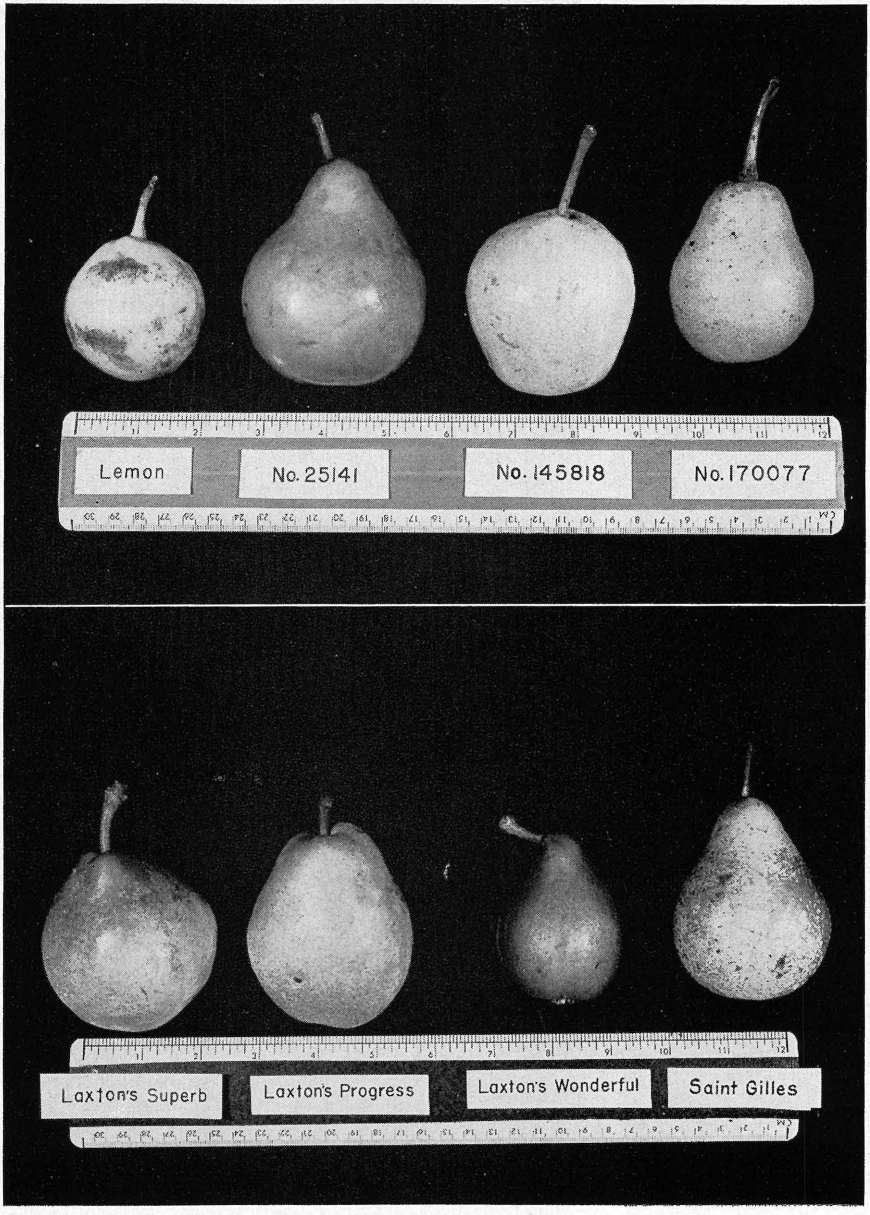
Lemon
No. 25141
No. 145818
No. 170077
Laxton's Superb
Laxton's Progress
Laxton's Wonderful
Saint Gilles

Fig. 13

DOYENNÉ GEORGES BOUCHER

Synonyms: Notaire Lepin

Origin: Seedling of Doyenné du Comice produced about 1885. Variety fruited first in 1894

Source: U.S.D.A. from Pinguet-Guindon et fils, St. Symphorien (Indre-et-Loire) France. 2/9/39 as P. I. 131486; from U.S.D.A. in 1941

Description:

Pinguet-Guindon. 1906. Poire Doyenné Georges Boucher. Rev. Hort. 78 (n. s. VI): 496

Chasset, L. 1914. Fruits Nouveaux. Doyenné Georges Boucher. Pomol. Franc. No. 2:52-53.

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Chasset, L. 1920. Doyenné Georges Boucher et Poire Notaire Lepin. Pomol. Franc. 3-4:42-43

Hedrick, U. P. 1921. **Pears of New York.** Page 367

Catalogue Descriptif Congrés Pomologique. Villefranche. 1927. Pages 317-318

Bunyard and Son Nursery Catalog, 1935-36

Baltet Nursery Catalog 1936-37

Bonnet Nursery Catalog 1938-39 (Notaire Lepin)

Delaunay Nursery Catalog 1938-39

Lepage Nursery Catalog 1938-39

Levavasseur Nursery Catalog 1938-39

Marnay Nurseries Catalog 1938-39

Pallez-Remy Nursery Catalog 1938-39

Pinguet-Guindon Nursery Catalog 1938-39

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 334-35

Fruit characteristics: (Figure 14)

Size: large

Shape: obovate pyriform to turbinate, somewhat irregular, surface tends to be "bumpy"

Color: green to greenish-yellow somewhat covered with russet

Flesh: white to yellow, soft, firm, tender, buttery, melting, juicy, sweet to subacid; stone cells scarce, confined to core region

Flavor: fair to good

Harvest date: third week in September

Keeping quality: good for reasonable time

General notes: When properly ripened one of the better-flavored French varieties. Fruits large, rather coarse, rough appearing and relatively unattractive. Quite susceptible to fire blight

DUCHESSE D'ANGOULÊME

Synonyms: Duchess D'Angoulême, Herzogin von Angoulême, De Pezenas

Origin: Seedling found near Angers, France. First propagated about 1808

Source: Bountiful Ridge Nurseries, Princess Anne, Marylind in 1937

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 154-156. (See also for list of earlier citations, 1832-1894)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Pages 298-299

Fruit characteristics: (Figure 16)

Size: large to very large

Shape: truncate, obovate pyriform, irregular and uneven surface

Color: green, occasionally blushed with red; netted at times with dull russet

Flesh: yellow, firm, coarse, crisp, juicy, subacid; stone cells scarce, not objectionable

Flavor: fair

Harvest date: third week in September

Keeping quality: holds well for short period

General notes: Not as attractive as desired. Flavor seems to lack depth. Recommended only as pollinizing variety for Bartlett.

DUCHESSE DE BERRY d'ETÉ

Synonyms: Duchesse de Berry, Duchess of Berry, Duchesse de Berri d'hiver, Berry

Origin: Seedbed in commune of Saint-Herblain, France, 1827

Source: U.S.D.A. from F. Delaunay, France, 4/7/39 as P. I. 132489; from U.S.D.A. in 1941

Description:

Scheidweiler, De M. 1844. Fruits Nouveau. Journal d'Horticulture Pratique (Belg.) 1:30

Simon-Louis Frères. 1895. Guide Pratique de l'amateur de Fruits. Page 260

Hedrick, U. P. 1922. **Pears of New York.** Page 371. (See also for list of earlier citations, 1869-1884)

Catalogue Descriptif Congrés Pomologique. Villefranche. 1927. Page 587

Delaunay Nursery Catalog, 1938-39

Fruit characteristics: (Figure 8)

Size: below medium to small

Shape: round to turbinate, no neck

Color: yellow to straw yellow, slight red blush

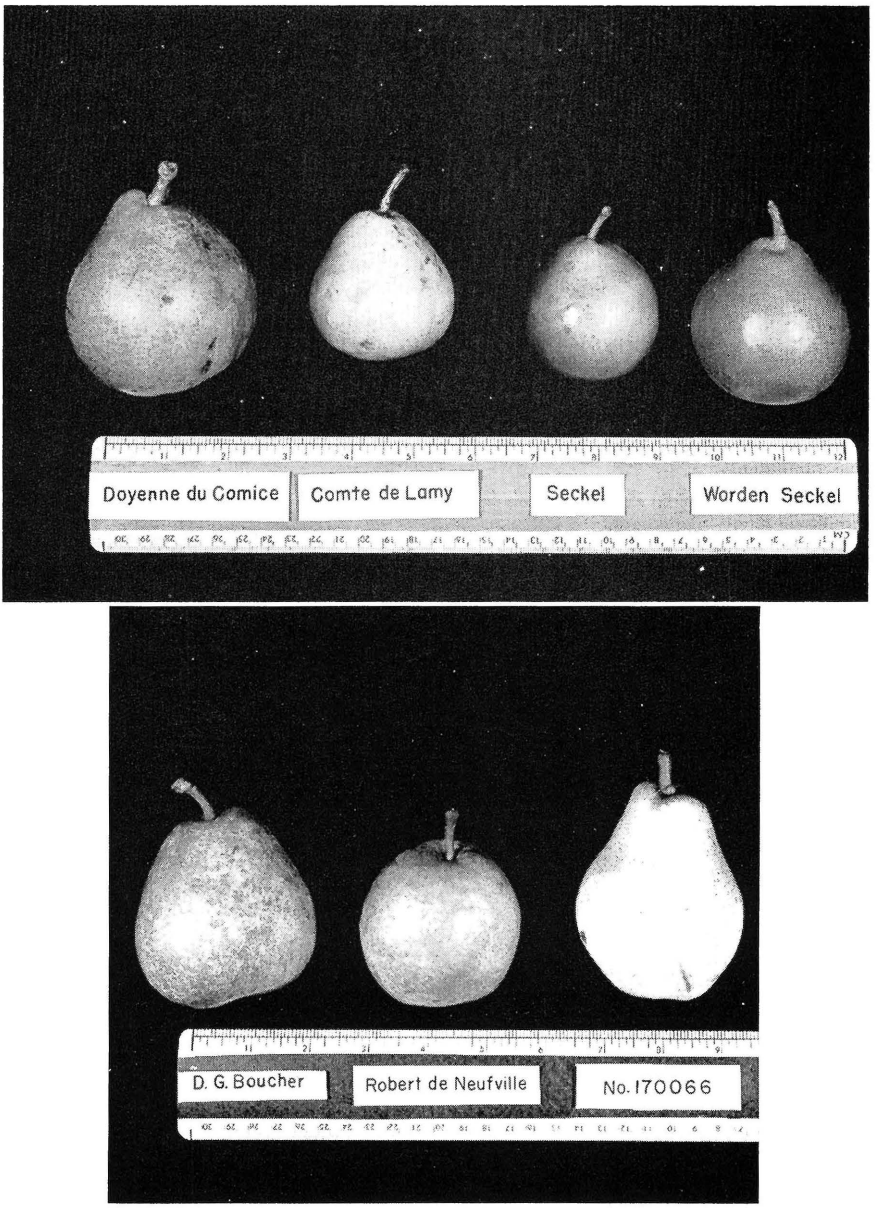
Doyenne du Comice
Comte de Lamy
Seckel
Worden Seckel
D. G. Boucher
Robert de Neufville
No. 170066

Fig. 14

Flesh: white, soft, fine, tender, melting, juicy, sweet to subacid; stone cells scarce, not objectionable
Flavor: poor to fair
Harvest date: last week of August, just preceding Bartlett
Keeping quality: short, few days only

General notes: Flavor not as satisfactory as reputed. Size unfavorable. Very susceptible to fire blight.

DUCHESSE DE BORDEAUX

Synonyms: Beurré Perrault, Bordeaux, Duchess de Bordeaux, Herzogin von Bordeaux

Origin: Originated from a seedling planted by M. Secher in the commune of Montjean, France, following purchase from M. Perrault, Montrevault. Fruited about 1860

Source: U.S.D.A. from Bunyard and Company Nursery, Maidstone, England, 1/28/39 as P. I. 131459; from U.S.D.A. 1941

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Page 371. (See also for list of earlier citations, 1869-1918)

Chasset, L. 1927. Toujours la Vigueur chez les arbres. Pomol. Franc. 1922; 11:188-189

Catalogue Descriptif Congrés Pomologique. Villefranche 1927:271-272

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 300

Bunyard and Co. Nursery Catalog, 1935-36

Fruit characteristics: (Figure 10)
Size: medium
Shape: rounded truncate
Color: greenish-yellow, slight blush
Flesh: white to yellow, firm, coarse, tough, medium dry, sweet to subacid; stone cells abundant, objectionable, scattered through flesh
Flavor: poor to fair
Harvest date: second week of October
Keeping quality: unknown

General notes: Characteristics generally unfavorable. Many stone cells. Undesirable commercially.

DUCHESSE HÉLENE D'ORLÉANS

Synonyms: Beurré Saint-Nicolas, Duchesse d'Orléans, Duquesa Elena de Orléans

Origin: From a seedbed made by Van Mons at Louvain, Belgium in 1839. Fruited first in 1847

Source: U.S.D.A. from Viveros Manuel San Juan, Sabinan, Taragoza Province, Spain, 5/4/34 as P. I. 105556; from U.S.D.A 1952

Description:

Simon-Louis Frères. 1895. Guide Pratique de l'amateur de Fruits. Page 75

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Page 372

Fruit characteristics: (Figure 18)

Size: medium

Shape: obovate, obscure neck, sides unequal, cavity practically wanting. Stem long and set obliquely. Rather fleshy and lipped at base

Color: greenish-yellow to yellow

Flesh: yellow, firm, medium tender, juicy, subacid; stone cells confined to core region

Flavor: fair

Harvest date: third week in September

General notes: Not particularly attractive, no outstanding characteristics.

EARLY SECKEL

Synonyms: none

Origin: Open pollinated seedling of Seckel produced by the New York Agricultural Experiment Station. Introduced for trial in 1935

Source: New York State Fruit Testing Association, Geneva, New York in 1943

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 119

New York State Fruit Testing Association Catalog, 1956-57

Fruit characteristics: (Figure 6)

Size: below medium to small, larger than Seckel

Shape: obovate pyriform, distinct neck

Color: greenish-yellow to yellow overspread with attractive red resembling Seckel

Flesh: yellow, soft, fine, tender, buttery, juicy, sweet; stone cells absent

Flavor: good to very good

Harvest date: third week in August, one week preceding Bartlett

Keeping quality: keeps reasonably well in storage for such an early variety

General notes: Early variety of Seckel type. One of best flavored and attractive of the early season varieties. Although larger than Seckel, small fruit a disadvantage but of possible value for local use and home gardens.

ENIE

Synonyms: none

Origin: unknown

Source: Horticultural Experiment Station, Vineland, Ontario, in 1952
Description:
Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Progress Report 1949-53. Central Experimental Farm, Ottawa. Page 32
Fruit characteristics: (Figure 6)
Size: small
Shape: round, apple-shaped, turbinate
Color: greenish-yellow, blushed with brown-red, not attractive
Flesh: yellow, firm, medium crisp to tender, fine texture, tender, juicy, sweet; stone cells not objectionable, confined to core region, beneath skin
Flavor: poor to fair
Harvest date: first week to August
Keeping quality: poor, softens almost immediately

General notes: Fruits not attractive and soften rapidly. Variety of no commercial value. Probably of Oriental inheritance.

EWART

Synonyms: none
Source: New York State Fruit Testing Association, Geneva, New York, 1929
Description:
Howe, G. H. 1929. New or Noteworthy Fruits X. New York Agricultural Experiment Station Bul. 578
New York State Fruit Testing Association Catalog, 1956-57
Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 119
Fruit characteristics: (Figure 9)
Size: above medium to large
Shape: obovate obtuse pyriform, resembles Bartlett
Color: greenish-yellow skin somewhat roughened with a russet in patches, not as attractive as might be desired
Flesh: yellow, soft, fine, buttery, tender, melting, juicy, subacid, sometimes stone cells but not objectionable
Flavor: very good to excellent, fine grained, like Duchess but with much greater depth of flavor
Harvest date: third week in September
Keeping quality: good; holds well into December

General notes: Productive, less blight susceptible than Bartlett; fruits of good quality but not as attractive as desired. Suitable as a pollinizing variety for Bartlett. Worthy of commercial trial. Probably best of newer domestic varieties to follow Bartlett in season.

FINDLING VON HOHENSAATEN

Synonyms: Trovatello di Hohensaat (Foundling hybrid)
Origin: Discovered as chance seedling about 1880 in pine forest of the domain Hohensaaten in Germany. Introduced about 1889

Source: U.S.D.A. as P. I. 105440 from Fratelli Sgaravatti Piante, Saonara, Italy, 3/20/34; from U.S.D.A. 1944

Description:

Mathieu, Ch. 1889. Die Birne "Findling von Hohensaaten" Pomol. Monatshefte XXXV: 1 (1) 1-4

Lucas, Fr. 1896. Findling von Hohensaaten. Pomol. Monatshefte XLII 3-4:49

Fruit characteristics: (Figure 17)

Size: below medium
Shape: obovate pyriform
Color: greenish-yellow to yellow with slight blush
Flesh: whitish-yellow, soft, fine, buttery, tender, juicy, subacid; stone cells largely in core line
Flavor: fair to good
Harvest date: second week in September
Keeping quality: short time only

General notes: Fruits relatively unattractive. Possesses no particularly favorable characteristics.

FLEMISH BEAUTY

Synonyms: Belle de Flanders, Fondante des Bois, Holzfarbige Butterbirne, Beurré Davy

Origin: Seedling found in woods in Belgium and introduced by Van Mons in 1818. Introduced into America prior to 1830

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Pages 163-164. (See also for list of earlier citations, 1830-1904)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 305

Fruit characteristics: (Figure 7)

Size: above medium
Shape: oval, roundish to obovate obtuse pyriform, nearly equal sides
Color: yellowish-green becoming yellow; reddish blush on exposed cheek
Flesh: yellow, firm, medium texture, tender, juicy, sweet to subacid, aromatic; stone cells scarce, confined to core region
Flavor: good to very good
Harvest date: second week in September

General notes: Very good flavor as grown at Wooster. Quite aromatic. Very susceptible to fire blight. Attractive

FONDANTE DE CRONCELS

Synonyms: none

Origin: Seedling of Clapp Favorite × Virginia Baltet. Baltet Frères, France

Source: U.S.D.A. from Baltet Frères. 2/24/38 as P. I. 127384; from U.S.D.A. in 1939

Description:

Baltet Frères Nursery Catalog 1935-36

Fruit characteristics:

Size: below medium to small

Shape: round to turbinate, fleshy at base of stem, no neck

Color: greenish-yellow, faint blush and partly russetted

Flesh: yellow, soft to firm, fine, tender, melting, medium juicy, sweet; stone cells absent

Flavor: fair to good

Harvest date: first week in August preceding Bartlett by at least three weeks

General notes: Fruits smaller than reported by Baltet. Fair to good flavor. Unattractive shape. One of the earliest harvested varieties at Wooster.

GLOU MORCEAU

Synonyms: Gloux Morceau, Hardenpont's Winter Butterbirne, Glout Morceau, Beurré d'Hardenpont, Beurré de Kent, Beurré Lombard, Beurré d'Arenberg, Goulu Morceau, Beurra d'Aremberg

Origin: Seedling raised by Abbe M. Hardenpont, at Mons, Belgium about 1751

Source: unknown

Description:

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Pages 172-173. (See also for list of earlier citations, 1825-1904)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Pages 248-249

Kessler, H. 1949. **Pomologie Illustrée,** Berne, Switzerland

Fruit characteristics: (Figure 18)

Size: medium to large

Shape: obovate obtuse pyriform, somewhat ribbed, sides unequal, cavity obscure, narrow, shallow

Color: pale green becoming greenish-yellow to yellow

Flesh: yellow, fine-grained, tender, medium juicy, buttery, sweet but astringency present near skin. Stone cells: few at base

Flavor: good when not astringent
Harvest date: second week in October
Keeping quality: reasonably good

General notes: Not outstanding as grown at Wooster. Fruit tends to have excessive astringency. Variety introduced as P. I. 105138 Beurre d'Arenberg was in reality Glou Morceau. Very susceptible to fire blight.

GOLDEN SPICE

Synonyms: none
Origin: Originated by Minnesota Agricultural Experiment Station (Minnesota No. 4). Parentage unknown. Introduced 1949
Source: Minnesota Agricultural Experiment Station in 1953
Description:
Minnesota Horticulturist Vol. 77(3). Page 37. 1949
Turnquist, Orrin C. and Leon C. Snyder. 1944. Fruit Varieties for Minnesota. Minn. Agr. Ext. Serv. Bul. 225:8
Fruit characteristics: (Figure 16)
Size: small
Shape: obovate, acute pyriform, neck very indistinct
Color: yellow with pink blush
Flesh: yellow, soft, fine, buttery, tender, juicy, sweet to subacid, occasionally vinous; stone cells absent
Flavor: poor to fair
Harvest date: first week in September
Keeping quality: will keep for short period

General notes: Small, attractive; no value from commercial viewpoint in Ohio Reported to be very resistant to fire blight, vigorous and productive (Minnesota).

GORHAM

Synonyms: none
Origin: Seedling of Bartlett × Josephine de Malines originated by the New York Agricultural Experiment Station. Introduced in 1928
Source: New York State Fruit Testing Association, Geneva, New York
Description:
Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 119
New York State Fruit Testing Association Catalog, 1956-57
Fruit characteristics: (Figure 9)
Size: medium
Shape: obovate pyriform, resembles Bartlett somewhat
Color: greenish-yellow to yellow. Attractive
Flesh: white, tender, buttery, juicy, sweet to subacid; stone cells absent

Flavor: good to very good
Harvest date: second week in September. Two weeks later than Bartlett
Keeping quality: fair, may keep well into December

General notes: Resembles Bartlett to some extent. Possibly more susceptible to fire blight than Bartlett. Unreliable bearer at Wooster. Attractive fruit.

HARBIN

Synonyms: none
Origin: Seedling of **Pyrus ussuriensis,** introduced by N. E. Hansen, South Dakota Agricultural Experiment Station in 1926 from North China
Source: South Dakota Agricultural Experiment Station, 1952
Description:
Hansen, N. E. 1927. Plant Introductions (1895-1927). South Dak. Agr. Exp. Sta. Bul. 224:36
Leslie, W. R. 1946. Tree fruits grown in Prairie Orchards. Dom. Can. Farmers Bul. 135
McCrory, S. A. Personal correspondence. Letter dated 2/6/56
Fruit characteristics: (Figure 26)
Size: small
Shape: roundish oblate, apple-shaped
Color: greenish-yellow to yellow
Flesh: white, soft, medium to coarse, tender to tough, medium dry, sour; stone cells confined to core region, bundant
Flavor: very poor
Harvest date: second week in September
Keeping quality: very poor

General notes: No commercial value. Fruit quality too poor. Breaks down quickly while still apparently firm. Reported to be extremely winter hardy and resistant to fire blight. (South and North Dakota).

HOOD

Synonyms: none
Origin: Originated as chance seedling in Florida
Source: U.S.D.A. from Glen Saint Mary Nursery, Florida through Harold Hume; from U.S.D.A. in 1947
Fruit characteristics: (Figure 9)
Size. medium to below medium
Shape: roundish, obtuse pyriform, neck wanting
Calyx: open, no lobes
Color: greenish-yellow
Flesh: yellow, coarse, tender, juicy, subacid; stone cells firm, not objectionable, confined to core region
Flavor: poor
Harvest date: second week in September
Keeping quality: poor

General notes: Breaks down quickly. Oriental type. No commercial value. Reported to be fire blight resistant.

HOWELL

Synonyms: Howell's Seedling
Origin: Seedling of a local variety called Jonah planted in Connecticut about 1829
Source: Greening Nursery, Monroe, Michigan, in 1937
Description:
Hedrick, U. P. 1921. **Pears of New York.** Pages 174-175. (See also for list of earlier citations 1849-1865)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York
Fruit characteristics: (Figure 16)
Size: medium
Shape: turbinate, obovate, pyriform, neck wanting
Color: greenish yellow to yellow
Flesh: yellow, soft, fine, tender, juicy, subacid; stone cells confined to core region
Flavor: fair
Harvest date: fourth week of September
Keeping quality: fair
General notes: An old variety of no particular value.

JOSEPHINE DE MALINES

Synonyms: Josephine von Mecheln, Malines
Origin: Originated about 1830 as seedling at Mechlen, Belgium
Source: U.S.D.A. from Herm. P. Mauk, Bad Friedrichshall, Kochendorf, Germany, as P. I. 126595, 1/8/38; from U.S.D.A. in 1940
Description:
Baltet, Ch. 1902. Les Poires a Chair Saumonee. Rev. Hort. 74:106-107
Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London
Hedrick, U. P. 1921. **Pears of New York.** Pages 179-180. (See also for list of earlier citations, 1855-1920)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits** Macmillan Co. New York
Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 312
Cook, Laurence J. 1948. Pear Joséphine de Malines. Gardeners' Chronicle, 123: No. 3195
Kessler, H. 1949. **Pomologie Illustrée.** Berne, Switzerland
Fruit characteristics: (Figure 17)
Size: medium to below medium
Shape: roundish turbinate
Color: greenish-yellow, one-half covered with fine russet, may be blushed with red

Flesh: white to yellow, soft to fine, medium fine, buttery, tender, juicy, sweet to subacid; stone cells not objectionable
Flavor: fair to good
Harvest date: third to fourth week in September
Keeping quality: good

General notes: Considerable tannin in fruit when not satisfactorily grown and ripened. May hold up well for two to three months in storage. Medium size a distinct disadvantage.

KIEFFER

Synonyms: Kieffer, Kieffer's Hybrid

Origin: Seedling of Chinese Sand Pear which bore first fruit in 1863 near Philadelphia, Pennsylvania. Presumably resulting from a cross with Bartlett

Source: New York State Fruit Testing Association, Geneva, New York, in 1935

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 180-182. (See also for list of earlier citations, 1880-1919)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

H. Mauk Nursery Catalog 1937-38

J. Zavelberg Nursery Catalog 1937-38

Fruit characteristics: (Figure 22)

Size: medium to large
Shape: angled (diamond-shaped), oval, narrowing at both ends
Color: yellow, no overcolor as grown at Wooster, occasionally roughened with russet in patches
Flesh: yellow, firm, coarse, crisp, juicy, subacid; stone cells abundant, objectionable, scattered through flesh
Flavor: poor to fair
Harvest date: third week of October
Keeping quality: good

General notes: Blight resistant. Poor dessert quality. Does not always ripen properly at Wooster.

LAWRENCE

Synonyms: none

Origin: Found at Flushing, Long Island sometime during first half of the 19th century

Source: unknown

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 185-186. (See also for list of earlier citations, 1884-1897)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Fruit characteristics: (Figure 23)
Size: medium
Shape: obovate obtuse pyriform
Color: yellow to lemon yellow
Flesh: yellow, soft, fine, buttery, juicy, sweet to subacid; stone cells scarce, scattered through flesh, also in core line
Flavor: fair to good
Harvest date: second week in October
Keeping quality: good, quality holds up in storage better than most varieties

General notes: Variety handicapped by size and not always attractive in appearance. Has never attained commercial importance despite outstanding keeping qualities.

LAXTON'S EARLY MARKET

Synonyms: none
Origin: Produced by crossing Marie Louise × Doyenne d'Eté. Introduced by Laxton Bros. Nursery, Bedford, England
Source: U.S.D.A. received from Laxton Bros., Bedford, England, as P. I. 127038, 2/8/38; from U.S.D.A. 1939
Description:
Laxton Bros. Nursery Catalog 1937-38; 1955-56, page 15
Potter, J. M. S. 1951. Report of National Fruit Trials, 1921-1950. Jour. Roy. Hort. Soc. LXXVI: page 248
Fruit characteristics: (Figure 8)
Size: small to medium
Shape: ovate, pyriform
Color: yellowish-green, blushed with red, not particularly attractive
Flesh: yellow, soft to firm, medium to tender, medium dry, subacid; stone cells scarce, confined to core region
Flavor: fair
Harvest date: first week in August
Keeping quality: poor, oversoft after 2 days at 70-80° F.

General notes: No larger than Seckel. A very early, rapidly softening variety of no particular merit. Season similar to that of Fondante de Croncels. Quite susceptible to fire blight.

LAXTON'S FOREMOST

Synonyms: none
Origin: Originated by Laxton Bros., Bedford, England
Source: U.S.D.A. from Laxton Bros., Bedford, England as P. I 176820; from U.S.D.A. in 1941
Description:
Laxton's Bros. Nursery Catalog, 1955-56, page 15
Fruit characteristics: (Figure 7)
Size: large
Shape: obovate pyriform
Color: yellow, some fruits blushed with red

Flesh: yellow, soft, fine to buttery, tender, juicy, subacid; stone cells absent
Flavor: good to very good
Harvest date: fourth week in August—about Bartlett season

General notes: Attractive, good quality. One of best varieties on trial at Wooster. Bartlett type but unfortunately same season of harvest. Quite susceptible to fire blight.

LAXTON'S PROGRESS

Synonyms: none
Origin: Originated by Laxton Bros., Bedford, England by crossing Marie Louise with Bartlett
Source: U.S.D.A. from Laxton Bros., Bedford, England 2/8/38 as P. I. 127039; from U.S.D.A. 1939
Description:
Laxton Bros. Nursery Catalog 1936-37; 1955-56, page 15
Fruit characteristics: (Figure 13)
Size: large
Shape: obovate pyriform
Color: yellow, frequently with attractive pink blush
Flesh: white to yellow, firm medium to fine, buttery, crisp, juicy, sweet to subacid; stone cells absent
Flavor: good to very good
Harvest date: first week in September
Keeping quality: possibly slightly inferior to Bartlett

General notes: Attractive, closely resembles Bartlett. Harvested one week later. One of the best of the Laxton series. Quite susceptible to fire blight. Recommended for limited commercial trial where Bartlett does well.

LAXTON'S RECORD

Synonyms: none
Origin: Originated by Laxton Bros., Bedford, England by crossing Marie Louise × Doyenné du Comice
Source: U.S.D.A. from Laxton Bros., Bedford, England 2/8/38 as P. I. 127040; from U.S.D.A. 1939
Description:
Laxton Bros. Nursery Catalog 1936-37; 1955-56, page 15
Fruit characteristics: (Figure 20)
Size: medium to above medium
Shape: acute to obtuse obovate pyriform
Color: yellowish-green blushed with red and some fine russet over surface
Flesh: whitish-yellow, soft, fine, buttery, tender, juicy, sweet; stone cells absent
Quality: fair to good
Harvest date: second week in October
Keeping quality: reasonably good

General notes: Quite attractive late variety. Worthy of limited trial commercially where late variety of Bartlett type is desired.

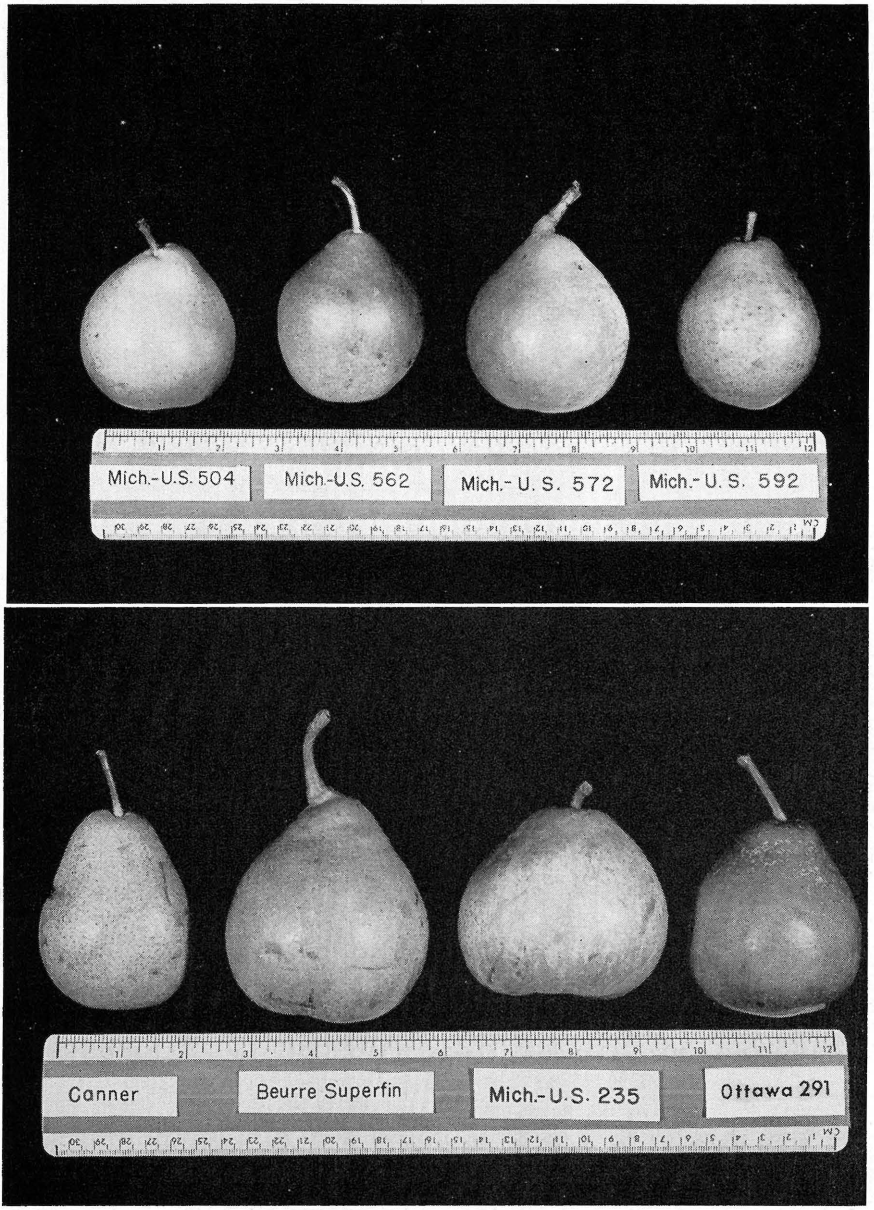
Mich.-U.S. 504
Mich.-U.S. 562
Mich.- U. S. 572
Mich.- U. S. 592
Canner
Beurre Superfin
Mich.-U.S. 235
Ottawa 291

Fig. 15

LAXTON'S SATISFACTION

Synonyms: none

Origin: Originated by Laxton Bros., Bedford, England by crossing Bartlett × Beurre Superfin

Source: U.S.D.A. from Laxton Bros., Bedford, England 2/8/38 as P. I. 127041; from U.S.D.A. 1939

Description:

Laxton Bros. Nursery Catalog 1935-36; 1955-56, page 15

Fruit characteristics: (Figure 7)

Size: medium—above medium

Shape: obovate pyriform, resembles Bartlett somewhat

Color: greenish-yellow

Flesh: greenish-yellow, firm, coarse to medium, tender, juicy, sweet to subacid; stone cells scarce to absent

Flavor: good

Harvest date: first week in September. Season of Bartlett

Keeping quality: similar to Bartlett

General notes: Slightly smaller and practically same season as Bartlett, which it resembles in a number of characteristics. Attractive. Flavor certainly comparable to Bartlett. Received award of merit, Royal Horticultural Society (England). Very susceptible to fire blight.

LAXTON'S SUPERB

Synonyms: none

Origin: Originated in 1901 by Laxton Bros., Bedford, England by crossing Beurré Superfin × Bartlett. Introduced 1913

Source: U.S.D.A. from Bunyard Nurseries, Maidstone, Kent, England, 4/21/37 as P. I. 106248; from U.S.D.A.

Description:

Geo. Bunyard Nursery Catalog 1935-36

Laxton Bros. Nursery Catalog 1936-37, 1955-56

Ellenwood, C. W., Leon Havis and F. S. Howlett. 1942. Fruit Varieties for Ohio. Ohio Agricultural Experiment Station Bul. 627

Porter, J. M. S. 1951. Report of National Fruit Trials. Jour. Roy. Hort. Soc. LXXVI: page 248

Fruit characteristics: (Figure 13)

Size: medium

Shape: obovate pyriform

Color: greenish-yellow, with some blush on some fruits

Flesh: whitish-yellow, soft, fine, tender, juicy, sweet to subacid; occasionally some tannin flavor; stone cells scarce, confined to core region, not objectionable

Flavor: good

Harvest date: two weeks ahead of Bartlett

Keeping quality: very short season—few days only

General notes: Early ripening variety with short season. Attractive. Only of value for the suburban or home garden where fruits may be used immediately. Award of merit, Royal Horticultural Society (England). Very susceptible to fire blight.

LAXTON'S VICTOR

Synonyms: none

Origin: Originated by Laxton Bros., Bedford, England by crossing Marie Louise × Seckel

Source: U.S.D.A. from Laxton Bros., 2/8/38 as P. I. 127042; from U.S.D.A. 1939

Description:

Laxton Bros. Nursery Catalog 1936-37; listed in 1955-56 catalog

Fruit characteristics: (Figure 21)

Size: small to medium

Shape: obovate pyriform

Color: greenish-yellow blushed with red and considerable russet

Flesh: white to yellow, soft, fine, buttery, tender, juicy, sweet; stone cells confined to core region

Flavor: fair to good

Harvest date: first week in October

Keeping quality: fair

General notes: Late variety somewhat larger than Seckel which it resembles to some extent. Flesh characteristics resemble Seckel. Very susceptible to fire blight at Wooster.

LAXTON'S WONDERFUL

Synonyms: none

Origin: Originated by Laxton Bros., Bedford, England by crossing Marie Louise × Fertility

Source: U.S.D.A. from Laxton Bros., Bedford, England 2/8/38 as P. I. 127043; from U.S.D.A. 1939

Description:

Laxton Bros. Nursery Catalog 1936-37, not listed in 1955-56 catalog

Fruit characteristics: (Figure 13)

Size: medium to above medium

Shape: obovate pyriform

Color: yellow, almost completely covered with fine russet

Flesh: yellow to green, soft, medium fine to buttery, tender to melting, juicy, subacid; stone cells scarce to absent, few in core line and scattered through flesh

Flavor: fair to good

Harvest date: third week in September

Keeping quality: Holds well into November

General notes: Bartlett type harvested three weeks later. Somewhat smaller fruit than Bartlett. Attractive fine russet over fruits. Has held well in storage through November. Quite susceptible to fire blight.

LE LECTIER

Synonyms: none

Origin: Auguste Leseur, horticulturist at Orleans, France originated variety about 1882 as a cross between Bartlett and Bergamotte Fortunee. Introduced about 1889

Source: U.S.D.A. from Rehfelder Baumschulen, Wilhelm Witt, Torgau (Elbe) Germany 4/28/39 as P. I. 132766; from U.S.D.A. 1940

Description:

Lucas, Fr. 1903. Le Lectier Birne. Pomol. Monatshefte 49:3-4

Mesle Fils. 1902. Observations Sur la Poire Le Lectier Rev. Hort. 74:87-88

Burvenich, Fred. 1905. Poire Le Lectier. Bul. d'Arboric. Pages 33-34

Chasset, L. 1915. Quelques observations sur la selection des greffes. Pomol. Franc. 10:229-236

Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London. Page 184

Hedrick, U. P. 1921. **Pears of New York.** Page 188. (See also for list of earlier citations, 1889-1906)

Heine, C. 1934. Winterbirne, die sich bewährt haben. Prakt. Ratgeber in Obst. u. Gemuseb. 49:6.61-62

Rehfelder Nursery Catalog 1938-39

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 316-317

Kessler, H. 1949. **Pomologie Illustrée,** Berne, Switzerland

Fruit characteristics: (Figure 16)

Size: large
Shape: acute obovate pyriform
Color: greenish-yellow with some russet over fruit surface
Flesh: yellow, firm, medium tender to tough, juicy, sweet to subacid, some tannin; stone cells scarce, a few around basin
Flavor: fair to good
Harvest date: first week of October
Keeping quality: good into January

General notes: An old late harvested variety of fair to good flavor. Has not always softened properly at Wooster.

LEMON

Origin: Presumably imported from Russia in 1879

Source: O.A.E.S. from W. P. Tufts, Department of Pomology, California Agricultural Experiment Station, Davis, California

Description:

Matthews, B. A. 1895. Iowa State Hort. Soc. Report 1894 Page 170

Fruit characteristics: (Figure 13)

Size: small
Shape: roundish
Color: yellow

Flesh: white to yellow, firm, medium tender, sweet to subacid; stone cells confined to core
Flavor: poor
Harvest date: first week in August

General notes: No value for its fruit. Has been used experimentally as intermediate stock, largely for Bartlett (California). No improvement over Old Home for this purpose at Wooster. Oriental inheritance.

LINCOLN

Synonyms: none
Origin: Seedling found in 1835 at Corwin, Illinois
Source: unknown
Description:
Hedrick, U. P. 1921. **Pears of New York.** Pages 190-191. (See also for list of earlier citations, 1845-1903)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Fruit characteristics: (Figure 7)
Size: medium
Shape: obovate pyriform
Color: yellow
Flesh: white, soft, medium, melting, juicy, sweet; stone cells abundant, confined to core region
Flavor: fair
Harvest date: first week in September

General notes: Quality variable. Season similar to Bartlett, seems to lack depth of flavor. Only fairly attractive. Certainly one of the better flavored blight resistant varieties of presumably Oriental inheritance.

LOUISE BONNE de JERSEY

Synonyms: Louise Bonne D'Avranches, Bonne Louise, Louise Bonne de Longueval
Origin: Seedling grown about 1780 by M. de Longueval at Avranches, Normandy
Source: E. D. Smith and Sons Nursery, Winona, Ontario in 1936
Description:
Hedrick, U. P. 1921. **Pears of New York.** Page 193. (See also for list of earlier citations, 1841-1914)
Hedrick, U. P. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York. 1922
Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 318

Fruit characteristics: (Figure 23)
Size: medium to above medium
Shape: obovate pyriform
Color: greenish-yellow becoming blushed with red

Flesh: white to yellow, soft, fine, buttery, tender, melting, subacid; stone cells scarce, confined to core region
Flavor: fair to good
Harvest date: third week of September
Keeping quality: reasonably good, possibly similar to Bartlett

General notes: As grown at Wooster does not have size and dessert quality reported by Hedrick. Relatively unattractive.

LUISA INVERNALE

Synonyms: Butirra d'inverno, San Germana D'inverno
Origin: unknown, became available prior to 1900
Source: U.S.D.A. from G. Giannini, Pistoia, Italy 3/20/34 as P. I. 104766; from U.S.D.A.
Description:
Giannini Nursery Catalog, 1933-34
Molon, G. 1901. **Pomologia.** Milan, Italy. Page 474
Fruit characteristics: (Figure 23)
Size: medium
Shape: obovate pyriform
Color: greenish-yellow blushed with red, attractive
Flesh: yellow, soft, fine, tender, juicy, sweet to subacid; stone cells scarce in skin, confined to core region
Flavor: fair
Harvest date: first to second week in October

General notes: Reasonably attractive late variety. Flavor at least fair. May be better when grown in other locations.

MADAME ERNEST BALTET

Synonyms: none
Origin: unknown
Source: U.S.D.A. from G. Giannini, Pistoia, Italy on 3/20/34 as P. I. 104767; from U.S.D.A. 1939
Description:
Baltet, Ch. 1908. Trait cult. Francais. Page 317
Hedrick, U. P. 1921. **Pears of New York.** Page 458
Fruit characteristics: (Figure 22)
Size: above medium to large
Shape: obovate pyriform
Color: green to greenish-yellow, no overcolor, one-fourth covered with fine russet
Flesh: white to yellow, soft, fine, buttery, melting, tender, medium dry to juicy, sweet to subacid; stone cells absent
Flavor: good to very good
Harvest date: second to third week in October
Keeping quality: good, holds better than Bartlett

General notes: Good quality late harvested variety. Reasonably attractive. Possibly should be given limited commercial trial to supplement Bartlett. May be unproductive. Quite susceptible to fire blight.

MAXINE

Origin: unknown. Propagated by E. M. Buechley, Greenville, Ohio about 1900 from an old tree found in Preble County, Ohio

Source: E. M. Buechley, Greenville, Ohio in 1923

Fruit characteristics: (Figure 10)

Size: medium

Shape: obovate pyriform, short, thick neck

Color: greenish-yellow to yellow, lemon yellow when ripe

Flesh: white to yellow, soft, fine, tender-to-melting, juicy, subacid; stone cells scarce, not objectionable, beneath skin

Flavor: fair to good, lacks depth

Harvest date: last week in August, close to Bartlett season

Keeping quality: fair, similar to Bartlett

General notes: Fairly attractive, fair quality generally speaking. Lacks depth of flavor. Medium size, considerable blight resistance.

MAX-RED BARTLETT

Synonyms: none

Origin: Zilah, Washington by A. D. MacKelvie. Patent No. 741. Introduced commercially in 1945. Trademarked Max-Red. Bud mutation of Bartlett discovered in 1938

Source: Mt. Arbor Nurseries, Shenandoah, Iowa, in 1952

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 120

Fruit characteristics: (Figure 10)

Size: above medium, resembles Bartlett

Shape: obtuse obovate pyriform, neck distinct

Color: usually marked cranberry red over entire fruit

Flesh: similar to Bartlett

Flavor: good to very good

Harvest date: first week in September, at least Bartlett season

Keeping quality: presumably similar to Bartlett

General notes: At Wooster approximately same harvest season as Bartlett. Attractive color. Similar to Bartlett in blight susceptibility. Worthy of trial to supplement Bartlett.

MENIE

Synonyms: none

Origin: Central Experimental Farm, Ottawa, Canada

Source: Central Experimental Farm, Ottawa, Canada in 1949

Description:

Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Progress Report, 1949-53. Central Experimental Farm, Ottawa. Page 32

Fruit characteristics: (Figure 6)

Size: below medium

Shape: roundish, obovate pyriform

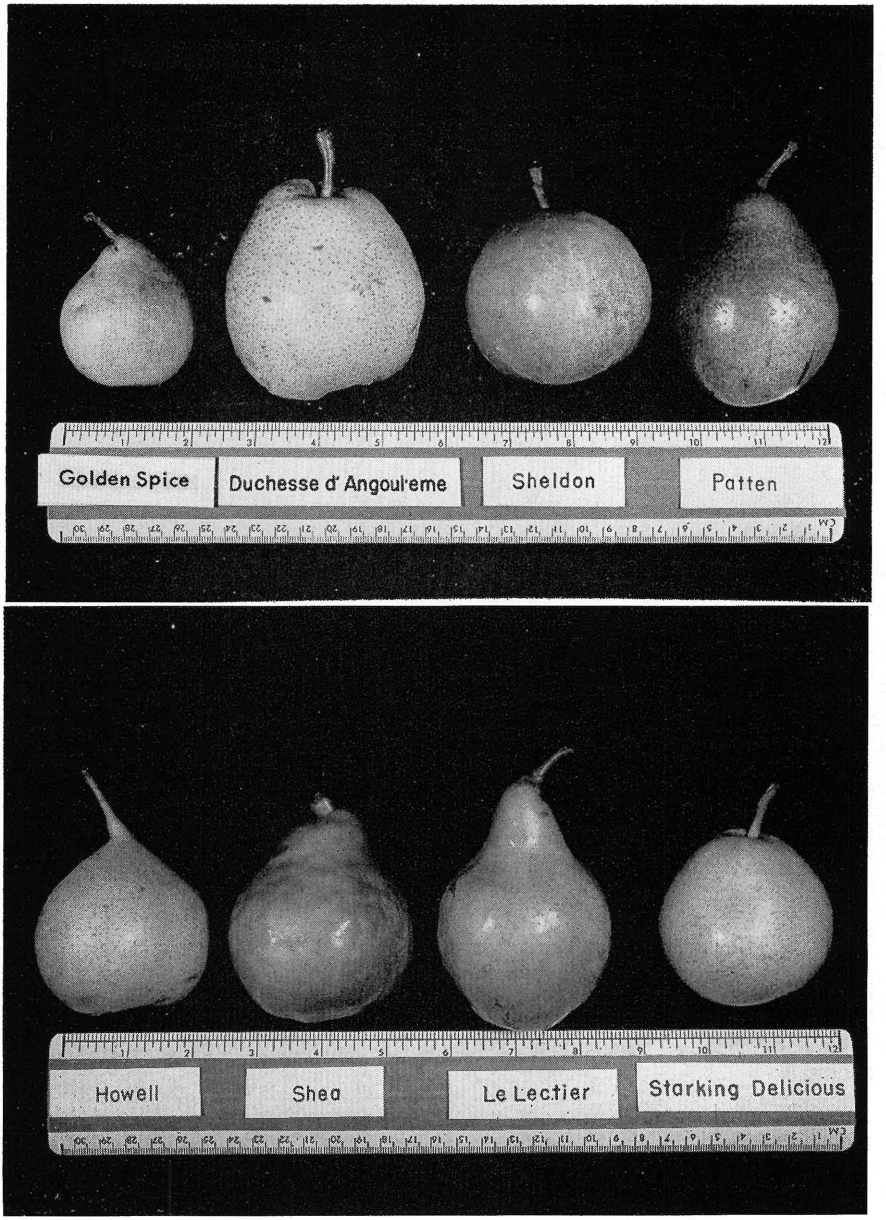
Golden Spice
Duchesse d' Angoul'eme
Sheldon
Patten
Howell
Shea
Le Lectier
Starking Delicious

Fig. 16

Color: greenish-yellow
Flesh: white, firm, medium crisp to tender; stone cells few, confined to core
Flavor: poor
Harvest date: second week in August
Keeping quality: poor, softens quickly

General notes: No commercial value, unattractive.

MICHIGAN 235

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a seedling of Seckel × Duchesse D'Angoulême

Source: South Haven Experiment Station, South Haven, Michigan in 1942

Fruit characteristics: (Figure 15)

Size: medium to above medium
Shape: roundish globular
Color: greenish-yellow, red blush on some fruits
Flesh: white to yellow, soft, fine, tender, buttery; stone cells few at core, not objectionable
Flavor: good to very good
Harvest date: middle of September

General notes: Generally good. Fairly attractive. One of better seedlings of series.

MICHIGAN 437

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a seedling of Barseck × Bartlett

Source: South Haven Experiment Station, South Haven, Michigan in 1942

Fruit characteristics: (Figure 17)

Size: medium
Shape: obovate pyriform
Color: greenish-yellow, blushed with red occasionally
Flesh: yellow, firm, soft, medium fine, buttery, tender, juicy, subacid; stone cells scarce, not objectionable
Flavor: poor to fair
Harvest date: third week in September
Keeping quality: very short

General notes: Poorest in flavor of any variety of this Michigan series. Would seem to be of no value except for breeding.

MICHIGAN 504

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a Barseck × Bartlett cross

Source: South Haven Experiment Station, South Haven, Michigan in 1940

Fruit characteristics: (Figure 15)

Size: medium

Shape: turbinate to obovate pyriform
Color: yellow, blushed with red. Attractive
Flesh: yellow, soft, fine, buttery, tender, melting, juicy, sweet to subacid; stone cells absent
Flavor: fair to good
Harvest date: third week of September

General notes: One of better flavored and appearing seedlings of this series. Reported to blight badly (Michigan and U.S.D.A.).

MICHIGAN 550

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a cross between Barseck and Bartlett
Source: South Haven Experiment Station, South Haven, Michigan in 1942
Fruit characteristics: (Figure 17)
Size: medium
Shape: obovate pyriform
Color: yellow, blushed with red similar to Vermont Beauty, also some russet
Flesh: yellow, firm to soft, fine, buttery, tender, juicy, sweet; stone cells scarce, not objectionable, few beneath skin
Flavor: fair
Harvest date: third week in September

General notes: Hardly satisfactory except possibly for further breeding.

MICHIGAN 562

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a cross of Barseck × Bartlett
Source: South Haven Experiment Station, South Haven, Michigan in 1941
Fruit characteristics: (Figure 15)
Size: medium
Shape: obovate pyriform
Color: greenish-yellow blushed with red
Flesh: yellow, soft, medium to fine, crisp to tender, juicy, sweet to subacid, occasionally a little piquant; stone cells scarce, confined to core region
Flavor: fair to good
Harvest date: second week in September
Keeping quality: good into December

General notes: Quite sweet, reasonably good quality. Holds up well in storage with no internal breakdown. Attractive, somewhat resembling Clapp Favorite. Quite blight susceptible at Wooster. Reported to be unproductive in Michigan.

MICHIGAN 566

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a cross of Barseck × Bartlett

Source: South Haven Experiment Station, South Haven, Michigan in 1940

Fruit characteristics: (Figure 17)

Size: medium to above medium

Shape: obovate pyriform

Color: greenish-yellow, a portion covered with russet

Flesh: white to yellow, firm, medium, tender, juicy, subacid; stone cells abundant, objectionable, scattered through flesh

Flavor: poor to fair

Harvest date: third week in October

Keeping quality: holds quite well

General notes: May be of value in further breeding for late bearing characteristics. Reasonably attractive and holds well in storage.

MICHIGAN 572

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station as a cross of Barseck × Bartlett

Source: South Haven Experiment Station, South Haven, Michigan in 1942

Fruit characteristics: (Figure 15)

Size: small to medium

Shape: turbinate to obovate pyriform

Color: greenish-yellow, blushed attractively with red

Flesh: yellow, soft, fine to buttery, tender, melting, juicy, sweet to subacid; stone cells scarce, not objectionable, confined to core region

Flavor: fair to good

Harvest date: third week in September

Keeping date: holds well into December

General notes: Attractive fruits, odor definitely spicy. No core breakdown even in soft specimens. Certainly should be used in further breeding. Reported to be capricious bearer (U.S.D.A.)

MICHIGAN 592

Origin: Originated cooperatively by U.S.D.A. and Michigan Agricultural Experiment Station. Unknown parentage, probably Winter Nelis × Bartlett

Source: South Haven Experiment Station, South Haven, Michigan in 1942

Fruit characteristics: (Figure 15)

Size: medium

Shape: turbinate to obovate pyriform

Color: yellow with smooth solid russet

Flesh: yellow, soft, fine, buttery, tender to melting, juicy. sweet to subacid; stone cells not objectionable

Flavor: good

Harvest season: third week in September

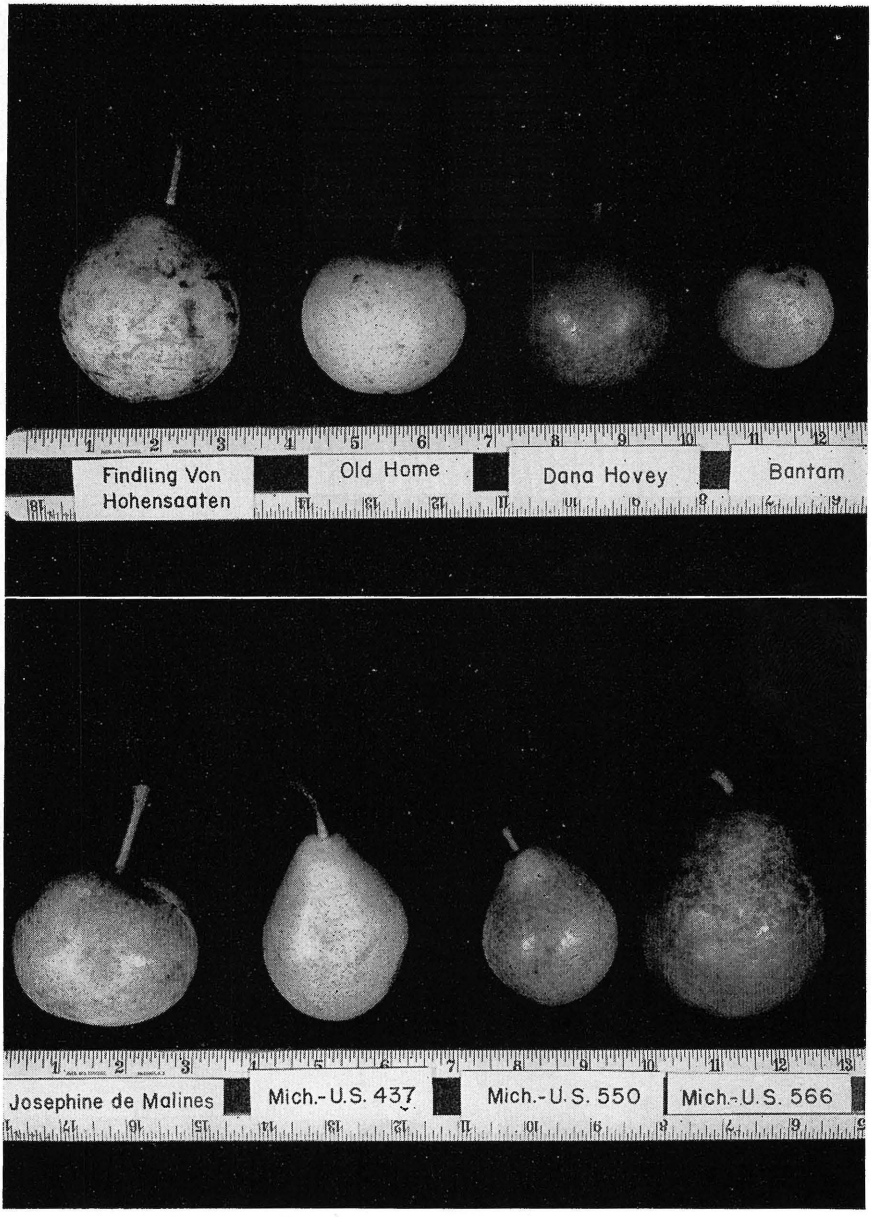
Findling Von Hohensaaten
Old Home
Dana Hovey
Bantam
Josephine de Malines
Mich.-U.S. 437
Mich.-U.S. 550
Mich.-U.S. 566

Fig. 17

General notes: Size tends to be a little small. Flavor may occasionally be too sweet but is unusually good. Resembles Shea and Sheldon.

MINEY

Synonyms: none
Origin: Central Experimental Farm, Ottawa, Canada
Source: Central Experimental Farm, Ottawa, Canada in 1949
Description:
Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Pears. Progress Report 1949-53. Central Experimental Farm, Ottawa. Page 32
Fruit characteristics: (Figure 6)
Size: medium
Shape: globular, obtuse, pyriform, no neck
Color: greenish-yellow, blended with red
Flesh: yellow, firm to soft, medium to fine, tender, juicy, sweet; stone cells confined to core region
Flavor: fair, some tannin evident
Harvest date: first week in August
Keeping quality: poor, softens almost immediately
General notes: very early variety. More attractive than Enie. Softens rapidly after harvest. Reported to be satisfactory for processing (Ottawa).

MISSOURI 83

Origin: Missouri Agricultural Experiment Station
Source: Missouri Agricultural Experiment Station in 1953
Description:
None available
Fruit characteristics: (Figure 21)
Size: medium
Shape: acute, obovate, pyriform
Color: greenish-yellow with some russet, brown-red blush
Flesh: yellow, medium fine, tender, juicy, subacid; stone cells confined largely to core region
Flavor: fair to good
Harvest date: third week of October
General notes: Skin roughened, prominent dots, unattractive.

MOE

Synonyms: none
Origin: Central Experimental Farm, Ottawa, Canada
Source: Central Experimental Farm, in 1949
Description:
Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Pears. Progress Report, 1949-53. Central Experimental Farm, Ottawa. Page 32
Fruit characteristics: (Figure 6)
Size: small
Shape: roundish, globular

Color: yellow, blushed with red
Flesh: yellow, firm to soft, medium tender, juicy, subacid; stone cells confined to core region
Flavor: poor
Harvest date: second week of August
Keeping quality: very short season, softens quickly
General notes: Size of Seckel, deficient in size.

NEW YORK 4885

Synonyms: none
Origin: New York Agricultural Experiment Station
Source: New York State Fruit Testing Association, Geneva, New York in 1954
Description:
New York State Fruit Testing Association Catalog, 1956-57
Fruit characteristics: (Figure 8)
Size: medium to above medium
Shape: ovate pyriform
Color: greenish-yellow
Flesh: white to yellow, soft, fine, buttery, tender, melting, medium dry, subacid; stone cells absent
Flavor: good
Harvest date: first week of September
General notes: Seedling follows Bartlett by a few days.

NEW YORK 7620

Origin: Cross of Bartlett with Marguerite Marillat. Originated by New York Agricultural Experiment Station, Geneva, New York
Source: New York State Fruit Testing Association, Geneva, New York, 1953
Description:
New York State Fruit Testing Association Catalog, 1956-57
Fruit characteristics: (Figure 19)
Size: medium
Shape: obovate pyriform, distinct neck
Color: greenish-yellow to yellow, no overcolor
Flesh: white to yellow, firm, fine, juicy, sweet; stone cells scarce
Flavor: good
Harvest date: probably first week in September close to Bartlett season

General notes: Attractive, worthy of trial to supplement Bartlett Harvest season coincides with Bartlett at Wooster.

NORDHAUSEN FORELLE

Synonyms: none
Origin: Unknown relationship to the old German variety Forelle
Source: U.S.D.A. as P. I. 172495; from U.S.D.A. in 1953

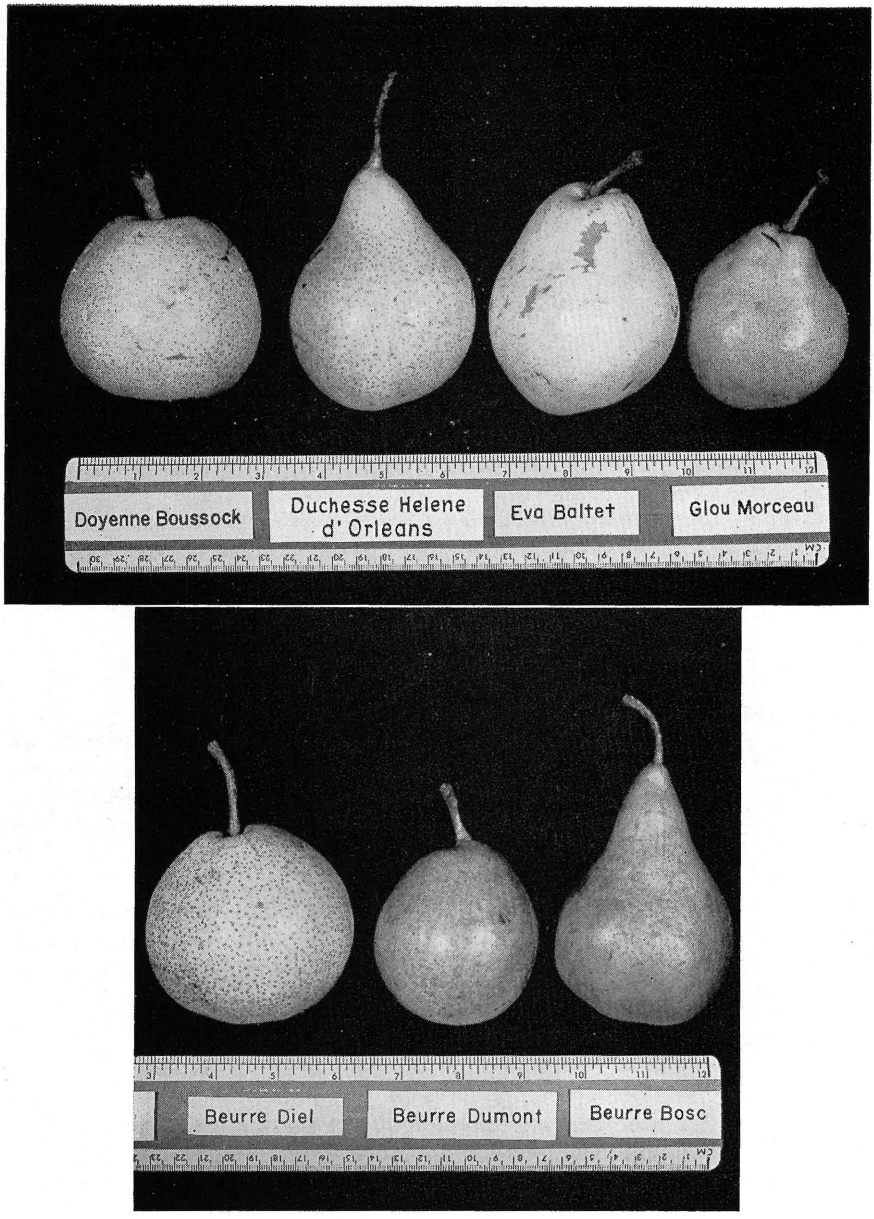
Doyenne Boussock
Duchesse Helene d' Orleans
Eva Baltet
Glou Morceau
Beurre Diel
Beurre Dumont
Beurre Bosc

Fig. 18

Fruit characteristics: (Figure 23)
Size: below medium to medium
Shape: ovate turbinate
Color: greenish-yellow becoming blushed with red
Flesh: yellow, firm to medium, juicy, sweet to subacid; stone cells not objectionable, confined to core region
Flavor: fair
Harvest date: second week of October
Keeping quality: fairly good

General notes: A late harvested small fruited variety.

OLD HOME

Synonyms: none
Origin: Unknown but presumably of European origin. Found in Benjamin Buckman's trial orchard, Farmingdale, Illinois
Source: California Nursery Company, Niles, California
Description:
Day, Leonard H. 1947. Apple, Quince and Pear Rootstocks in California. California Agricultural Experiment Station Bul. 700
Reimer, F. C. 1925. Blight Resistance in Pears and Characteristics of Pear Species and Stocks. Oregon Agricultural Exp. Sta. Bul. 214
Fruit characteristics: (Figure 17)
Size: small
Shape: round, slightly truncate, neck wanting
Color: yellowish-green to greenish-yellow, yellow when ripe
Flesh: white to yellow, firm to soft, fine to buttery, tender, mild, medium dry, subacid; stone cells scarce, not objectionable scattered around core
Flavor: poor
Harvest date: second week in September

General notes: Valuable only as blight resistant stock. Flavor and quality of fruit poor. Assumed to be variety of **Pyrus communis.** Recommended in Ohio as the blight resistant trunk and framework for other pear varieties.

OLIVIER DE SERRES

Synonyms: none
Origin: Raised from seed of Fortunée d'Angers about middle of 19th century in Rouen, France. First fruited in 1851
Source: U.S.D.A. from F. Delaunay, Angers, France 4/7/39 as P. I. 132494; from U.S.D.A. in 1940
Description:
Andre, Ed. 1902. La Poire Olivier de Serres. Rev. Hort. 74:375
Hedrick, U. P. 1921. **Pears of New York.** Pages 200-201. (See also for list of earlier citations, 1866-1909)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Catalogue Descriptif Congrés Pomologique. Villefranche. 1927. Page 322

Chasset, L. 1925. Catalogue des Fruits Adoptes. Pomol. Francais 8:154-157

Kronberg. (Dahlem). 1935. Praktische Obstkunde. Die Birnensorten "Esperens Bergamotte" und "Olivier de Serres". Deut. Garten 50:61

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 337

Fruit characteristics: (Figure 20)

Size: medium
Shape: rounded, truncate, globular
Color: greenish-yellow, some scattered russet
Flesh: white to yellow, soft, fine, tender, medium dry, sweet to subacid; stone cells scarce, not objectionable
Flavor: fair to good
Harvest date: third week in October
Keeping quality: holds well into January

General notes: Not particularly attractive. Late variety but certainly not outstanding.

ORIENT

Synonyms: none

Origin: Chico, California by the U.S.D.A. Introduced commercially in 1945 through the Tennessee Agricultural Experiment Station. Seedling of **Pyrus communis** × **Pyrus sp.** from China

Source: Interstate Nurseries in 1953

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 120

Fruit characteristics: (Figure 23)

Size: very large
Shape: roundish, globular
Color: greenish-yellow with some russet
Flesh: juicy, somewhat sweet, lacks depth of flavor
Flavor: poor to fair
Harvest date: second week in October

General notes: Oriental inheritance evident. Reported to be immune to fire blight. Of value only where blight immunity is imperative.

OTTAWA 291

Synonyms: none

Origin: Central Experimental Farm, Ottawa, Canada as seedling of Winter Nelis × Bartlett

Source: Central Experimental Farm, Ottawa, Canada in 1951

Description:

Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Horticulture Division. Pears. Progress Report, 1949-53. Central Experimental Farm, Ottawa. Page 32

Fruit characteristics: (Figure 15)
Size: medium
Shape: obovate pyriform
Color: greenish-yellow, nearly overspread with fine attractive russet
Flesh: yellow, soft, fine, buttery, tender, juicy, subacid, a little sprightly; stone cells absent
Flavor: good to very good
Harvest date: third to fourth week of September

General notes: Rather attractive russetted variety. Would seem to warrant limited commercial trial.

OVID

Origin: Originated by the New York Agricultural Experiment Station. Bartlett × Dorset cross made in 1912. Introduced in 1931

Source: New York State Fruit Testing Association, Geneva, New York in 1931

Description:
Brooks, R. M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 120

Fruit characteristics: (Figure 23)
Size: medium to large
Shape: obovate pyriform
Color: greenish-yellow, about one-half of surface russetted in form of patches
Flesh: yellow, firm, coarse, tough, medium dry, subacid
Flavor: poor to fair
Harvest date: third week of October
Keeping quality: presumably late in areas where variety softens properly

General notes: Has never ripened properly at Wooster regardless of harvest date. Apparently adapted to different climatic conditions than those prevailing in Ohio.

P–12

Origin: Originated by F. C. Reimer, U.S.D.A., Medford, Oregon

Source: Southern Oregon Branch Experiment Station, Medford, Oregon in 1948

Fruit characteristics: (Figure 26)
Size: small
Shape: small, obvate pyriform
Color: green, overspread with some russet
Flesh: yellow, fine, medium, tender to tart, medium dry, subacid to sour, considerable tannin; stone cells confined to core region
Flavor: very poor
Harvest date: third week in September

General notes: Formerly used in stock studies by F. C. Reimer. Found to possess undesirable characteristics and now discarded

P–87

Origin: Originated by F. C. Reimer, U.S.D.A., Medford, Oregon from French commercial pear seed

Source: Southern Oregon Branch Experiment Station, Medford, Oregon in 1948

Description:

Reimer, F. C. 1950. Development of Blight Resistant French Pear Rootstocks. Oregon Agr. Exp. Sta. Bul. 485:1-24

Fruit characteristics: (Figure 26)

Size: very small

Shape: round to turbinate

Color: yellowish-green, blushed with red, some russet

Flesh: white to yellow, firm, coarse, tough, medium dry, sweet to subacid, too much tannin; stone cells abundant, objectionable, scattered through flesh

Flavor: very poor

Harvest date: second week in September

General notes: Used experimentally as intermediate stock and for breeding of blight resistant stocks.

PASSE CRASSANE

Synonyms: Edelcrassane, Boisbunel, Surpasse Crassane

Origin: Obtained from bed of seeds planted in 1845 by M. Boisbunel at Rouen, France

Source: U.S.D.A. from Lecolier 2/28/39 as P. I. 131662; from U.S.D.A. 1941

Description:

Bul. d'Arboric. Belgium. 1877. Page 273

Downing, A. J. 1900. **The Fruit and Fruit Trees of America.** Page 829

Dauthenay, H. 1899. La Poire Passe Crassane. Rev. Hort. 71:162-163

Leroy, Andre. **Dict. Pomol.** 1869

Molon, G. 1901. **Pomologia.** Milan, Italy. Page 505-510

Hedrick, U. P. **Pears of New York.** 1921. Page 491

Catalogue Descriptif Congrés Pomologique. Villefranche. 1927. Page 325-326

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Pages 339-340

Kessler, H. 1949. **Pomologie Illustrée,** Berne, Switzerland

Fruit characteristics: none

Size: above medium to large

Shape: roundish truncate, no neck

Color: greenish-yellow, almost entirely overspread with russet, roughened

Flesh: white to greenish, soft, medium, tender, juicy, subacid; stone cells at core line not objectionable.

Flavor: poor

Harvest date: last week in September

General notes: No commercial value under Ohio conditions. Flavor and appearance unsatisfactory.

PATTEN

Synonyms: none
Origin: Originated by C. G. Patten, Charles City, Iowa
Source: Iowa Agricultural Experiment Station, Ames, Iowa in 1936
Description:
Turnquist, Orrin C. and Leon C. Snyder. 1955. Fruit varieties for Minnesota. Minn. Agr. Ext. Bul. 224
Fruit characteristics: (Figure 16)
Size: medium to above medium
Shape: obovate pyriform
Color: greenish-yellow blushed with red
Flesh: whitish-yellow, firm, coarse, tender to tough, medium dry to juicy, subacid; stone cells abundant, objectionable, scattered through flesh
Flavor: fair to good
Harvest date: Third week in September
General notes: Has not always ripened properly at Wooster. Reported to be very hardy. (Iowa).

PERO DEL BRIGA

Synonyms: none
Origin: An Italian variety advertised as new in 1933
Source: U.S.D.A. from Fratelli Ingegnoli, Milan, Italy 3/5/34 as P. I. 104549; from U.S.D.A. in 1953
Description:
Ingegnoli Nursery Catalog 1933
Fruit characteristics: (Figure 22)
Size: medium
Shape: globular, obtuse to obovate, neck wanting
Color: green with possibly one quarter of surface covered with fine russet
Flesh: greenish, firm, coarse to medium tough, sweet to subacid; stone cells scarce, confined to core region
Flavor: fair to good
Harvest date: second week of October
Keeping quality: Seems to hold well into December
General notes: A late harvested variety. Needs further observation.

PEROLA

Synonyms: none
Origin: unknown
Source: U.S.D.A. from Portugal as P. I. 183964; from U.S.D.A. in 1952
Description:
None available
Fruit characteristics: (Figure 22)
Size: small to medium
Shape: rounded to obovate pyriform, occasionlly turbinate

Color: greenish-yellow with some russet flecks. Red blush on some fruits
Flesh: yellow, soft, tender, medium dry, juicy, sweet to subacid, some tannin present; stone cells absent
Flavor: poor to fair
Harvest date: second week in September
General notes: Unattractive, no value commercially.

PHILESON

Synonyms: none
Origin: Central Experiment Farm, Ottawa, Canada
Source: Central Experiment Farm in 1953
Description:
Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Pears. Progress Report, 1949-53. Central Experimental Farm, Ottawa. Page 32
Fruit characteristics: (Figure 11)
Size: medium
Shape: turbinate
Color: greenish-yellow
Flesh: yellow, firm, medium fine, crisp, juicy, sweet to subacid; stone cells scarce, not objectionable, confined to core region and skin
Flavor: fair
Harvest date: first week of September
General notes: Reported to keep several weeks at 32° F. (Ottawa).

PHILIPPE CHAUVEAU

Synonyms: none
Origin: Originated by M. Chauveau—Chenu of Lucon (Verdee) France and introduced about 1939 in France and England
Source: U.S.D.A. from F. Delaunay, Angers, France 4/18/40 as P. I. 136513; from U.S.D.A. in 1942
Description:
Chasset, L. 1937. Une Poire Nouvelle: Philippe Chauveau Pomologie Francaise 5-6
T. Hilling and Co. Nursery Catalog 1940-41
Baltet Frères Nursery Catalog 1948-49
Fruit characteristics: (Figure 6)
Size: medium
Shape: oblong obovate pyriform
Color: yellow, with mottled pink to red blush, attractive
Flesh: yellow, soft, fine, buttery, tender, melting, juicy, subacid; stone cells confined to core region, not objectionable
Flavor: fair to good
Harvest date: first to second week in August
Keeping quality: very short season, softens almost immediately

General notes: A very early harvested variety of short season Flavor good and fruit attractive. Very susceptible to fire blight.

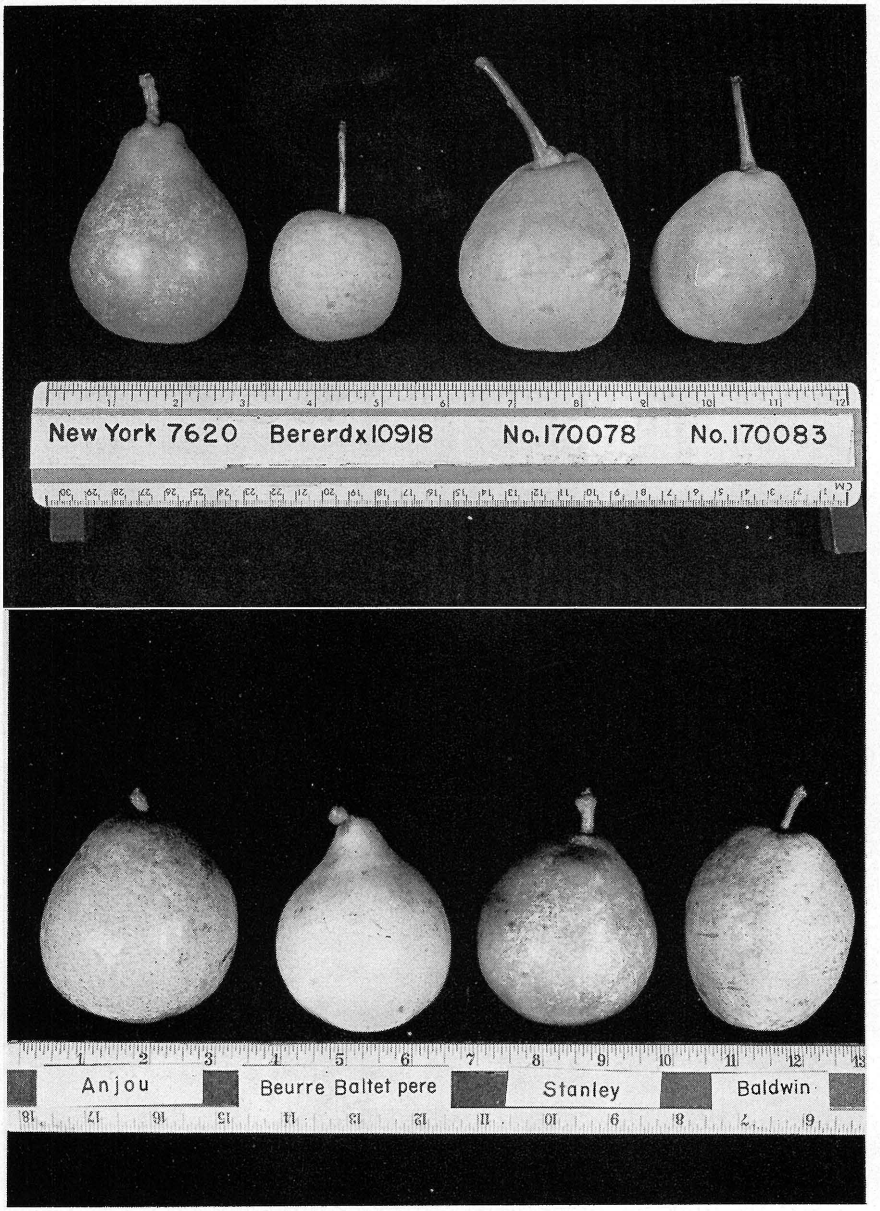
New York 7620
Berердx10918
No.170078
No.170083
Anjou
Beurre Baltet pere
Stanley
Baldwin

Fig. 19

PRESIDENT BARABÉ

Synonyms: none

Origin: Seedling of Bergamotte Esperen fruiting first in 1870 at Rouen, France. Introduced in 1877

Source: U.S.D.A. from Bunyard Nurseries, Maidstone, England, 1/28/39 as P. I. 131461; from U.S.D.A. in 1941

Description:

Simon-Louis Frères. 1895. Guide Pratique de l'amateur de Fruits. Page 97

Luizet, Gabriel. 1915. Poire President Barabé. Pomologie Francaise 9:215-217

Bunyard, Edward A. 1920. **Handbook of Hardy Fruits.** Murray. London

Hedrick, U. P. 1921. **Pears of New York.** Pages 508-509

Bunyard Nursery Catalog 1938-39

Fruit characteristics: (Figure 22)

Size: medium

Shape: roundish globular

Color: yellow, blushed with red

Flesh: yellow, firm to soft, fine, buttery, tender, melting, sweet; stone cells scarce, confined to core region

Flavor: fair to good

Harvest date: second to third week in October

Keeping quality: good for reasonable period but not equal to Winter Nelis

General notes: Fairly attractive. Reasonably good flavor. One of the better late harvested varieties. Apparently quite blight susceptible. Needs further observation.

PULTENEY

Synonyms: none

Origin: Originated by the New York Agricultural Experiment Station, Geneva, New York as a Winter Nelis × Russet Bartlett cross. Introduced in 1925

Source: New York State Fruit Testing Association, Geneva, New York in 1928

Description:

Hedrick, U. P. 1925. New or Noteworthy Fruits VIII. New York Agricultural Experiment Station Bul. 531

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 121

Fruit characteristics: (Figure 10)

Size: medium to large

Shape: oblong to obtuse pyriform, shape of Bartlett

Color: green becoming yellow. No blush. Not as attractive as Bartlett

Flesh: white, fine, crisp, juicy, subacid

Flavor: fair to good

Harvest date: third week in September
Keeping quality: reasonably good

General notes: A rather dull Bartlett type. A little too acid and hardly sufficiently attractive. Has blighted considerably at Wooster.

RICHARD PETERS

Syonyms: none

Origin: Originated by Pennsylvania State University. Introduced commercially in 1927. Probably an open-pollinated seedling of Kieffer.

Source: Arkansas Agricultural Experiment Station in 1945

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 121

Fruit characteristics: (Figure 9)

Size: above medium

Shape: obovate pyriform, rather rough and coarse appearing

Color: greenish-yellow overspread with fine russet, bronze tinge

Flesh: yellow, soft, fine, tender to melting, subacid; stone cells scarce, confined to core region

Flavor: fair

Harvest date: first to second week of September

Keeping quality: reasonably well

General notes: Reported to be very blight resistant (Penn). Would seem to be of value only where fire blight limits pear production.

ROBERT de NEUFVIILLE

Synonyms: none

Origin: Originated from breeding program of the Geisenheimer Lehr und Forschungsanstalt Geisenheim, Germany as a cross of Clapp Favorite × August Jurie. Introduced in 1915

Source: U.S.D.A. as P. I. 125739; from U.S.D.A. in 1941

Description:

None available

Fruit characteristics: (Figure 14)

Size: medium

Shape: roundish oval to turbinate

Color: greenish-yellow, not particularly attractive

Flesh: greenish to yellow, soft, fine to rather coarse, buttery, tender, melting, juicy, sweet to subacid; stone cells scarce, confined to core region

Flavor: fair to good

Harvest date: last week in August, to first week of September

Keeping quality: good for variety of Bartlett season. Will hold well into November

General notes: Approximate season of Bartlett. Good quality when properly grown and ripened. Quite susceptible to fire blight at Wooster.

RUSSET BARTLETT

Synonyms: none

Origin: Originated from Bartlett as a bud mutation in Moyer Orchard, Jordon Harbour, Ontario, prior to 1918

Source: E. D. Smith and Sons Nursery, Winona, Ontario, Canada in 1937; also from A. D. Shamel, Riverside, California in 1935 as No. PR-11-B

Description:

Palmer, E. F. 1946. Fruit Varieties. Ontario Dept. Agr. Bul. 430

Truscott, J. H. L. 1953. The Russet Bartlett. Report Hort. Products Laboratory, Vineland, Ontario. 1951-52. Ontario Dept. Agr. Pages 78-79

Fruit characteristics: (Figure 10)

Size: medium size, tending to be somewhat smaller than Bartlett

Color: smooth russet over entire surface

Flesh: similar to Bartlett but possibly not as juicy

Flavor: very good

Harvest date: usually harvested at Wooster slightly after Bartlett

Keeping quality: Holds in storage better than Bartlett

General notes: Attractive fruits similar to Bartlett in shape and flavor. Stores better than Bartlett. Worthy of limited trial to extend Bartlett season.

SAINT GILLES

Synonyms: none

Origin: Unknown. Introduced by Baltet Frères about 1925

Source: U.S.D.A. 12/23/38 from Baltet Frères as P. I. 131136; from U.S.D.A. in 1940

Description:

Baltet Nursery Catalog 1935-36

Fruit characteristics: (Figure 13)

Size: medium

Shape: greenish-yellow, overspread with some russet

Flesh: yellow, soft, fine, medium tender, juicy, sweet to sub-acid; stone cells scarce, not objectionable

Flavor: fair to good, seems to lack depth of flavor

Harvest date: second week of September

Keeping quality: poor

General notes: Fruit does not keep well. No particular outstanding characteristics. Very susceptible to blight at Wooster.

SECKEL

Synonyms: none

Origin: Found in wood near Philadelphia at near the end of the 18th century

Source: Greening Nursery, Monroe, Michigan in 1936 (Goodings strain)

New York State Fruit Testing Association, Geneva, New York in 1935

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 215-216. (See also for list of earlier citations 1831-1920)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Fruit characteristics: (Figure 14)

Size: small

Shape: roundish to oval

Color: greenish-yellow, dull, blushed with red

Flesh: white to yellow, soft, fine, buttery, tender, melting, sweet; stone cells scarce to absent, not objectionable

Flavor: very good

Harvest date: second week in September

Keeping quality: reasonably good

General notes: Very satisfactory for home garden use. Little value commercially.

SHEA

Synonyms: none

Origin: Apparently a seedling, possibly of Sheldon, obtained by Cole Nursery, Painesville, Ohio, prior to 1928

Source: Cole's Nursery, Painesville, Ohio in 1928

Description:

No record available at Cole Nursery

Fruit characteristics: (Figure 16)

Size: above medium

Shape: obovate to obtuse pyriform, roughened and somewhat irregular

Color: yellow overspread with fine russet similar to Sheldon

Flesh: white, soft to firm, fine, buttery, melting, tender, juicy, sweet; stone cells not objectionable, confined to core region

Flavor: good to very good

Harvest date: third week in September

Keeping quality: good for short period

General notes: Very good flavor. Somewhat resembles Sheldon in appearance although surface is roughened. Reasonably attractive because of yellow undercolor and fine russet. Some susceptibility to fire blight.

SHELDON

Synonyms: none

Origin: Seedling produced about 1815 near Huron, Wayne County, New York

Source: E. D. Smith and Sons Nursery, Winona, Ontario, Canada in 1936

Description:

Hedrick, U. P. 1921. **Pears of New York.** Page 217. (See also for list of earlier citations 1851-1869)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

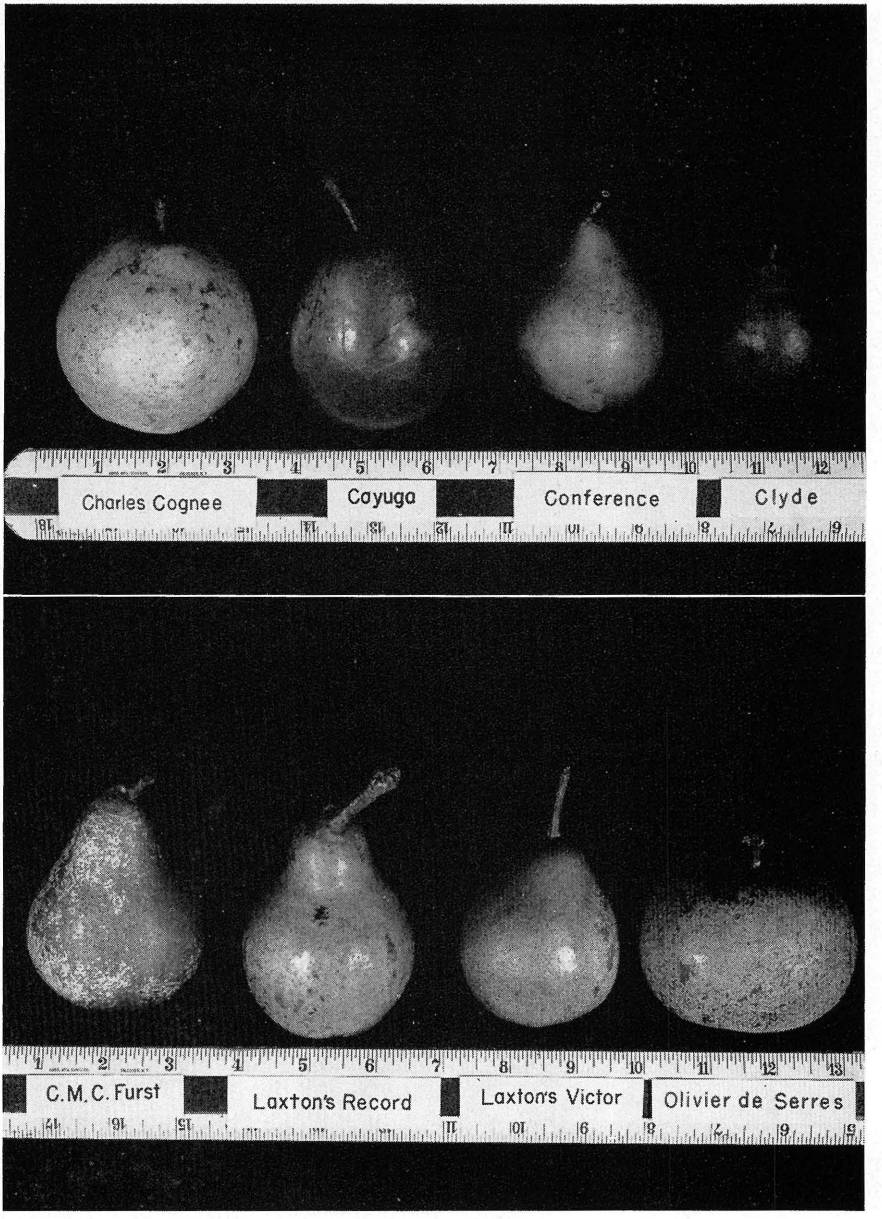
Charles Cognee
Cayuga
Conference
Clyde
C.M.C. Furst
Laxton's Record
Laxton's Victor
Olivier de Serres

Fig. 20

Fruit characteristics: (Figure 16)
Size: medium
Shape: roundish turbinate
Color: greenish-red, overspread with fine russet, occasionally a reddish blush
Flesh: yellow, firm to soft, medium fine to buttery, tender, juicy, sweet; stone cells few, confined to core region
Flavor: good to very good
Harvest date: last week in September
Keeping quality: good for short time

General notes: Highly flavored variety. Medium size. Attractive fruit. Very susceptible to fire blight.

SIR HARRY VEITCH

Synonyms: none
Origin: Originated by crossing Thompson's and Josephine de Malines
Source: U.S.D.A. from Clibrans Nursery, Altringham, England as P. I. 131096 12/20/38; from U.S.D.A. in 1940
Description:
Clibrans Nursery Catalog 1938-39
Fruit characteristics: (Figure 22)
Size: medium
Shape: obovate pyriform
Color: yellowish-green with some russet
Flesh: white, soft, fine, buttery, tender to melting, medium dry to juicy, subacid; stone cells absent
Flavor: fair to good
Harvest date: third week of September

General notes: Variety not outstanding. Unattractive fruits. Award of Merit (Royal Horticultural Society, England). Quite susceptible to fire blight.

SOUVENIR d'EMILE COUÉ

Synonyms: none
Origin: France. Presumably a seedling of Beurré Six, Baltet Nurseries, 1927
Source: U.S.D.A. from Martino Bianchi Nursery, Pistoia, Italy 1/8/34 as P. I. 104056; from U.S.D.A. in 1939
Description:
Pinquet Guindon Nursery Catalog 1938-39
Aubin. 1927. Commission de degustation. Pomologie Francais 11-12:210-212
Bianchi Nursery Catalog 1932-33, 1955-56
Baltet Nursery Catalog 1935-36
Fruit characteristics: (Figure 24)
Size: medium
Shape: oblong acute pyriform
Color: yellow-green

Flesh: greenish, firm, medium tender, medium dry, subacid; stone cells confined to core region, not objectionable
Flavor: fair to good, some astringency next to skin
Harvest date: second week in October

General notes: Not particularly attractive, fruit generally too small. Quite susceptible to fire blight.

SOUVENIR de JULES GUINDON

Synonyms: Ricardo di J. Guindon

Origin: Originated as a seedling of Doyenne d'Hiver in 1872 at Tours, France

Source: U.S.D.A. as P. I. 104555 from Fratelli Ingegnoli, Milan, Italy 3/5/34; from U.S.D.A. in 1947

Description:

Miler, E. 1898. Nouvelles Poires d'Hiver. Bul. D'Arboriculture (Belgium). Pages 173-174

Catalogue Descriptif Congrés Pomologique. Villefranche. 1927. Pages 340-341

Baltet Nursery Catalog 1935-36

Le Verger Francais. 1947. I **Catalogue Descriptif des Fruits Adoptés Par le Congrés Pomologique.** B. Arnaud, Lyon, France. Page 351

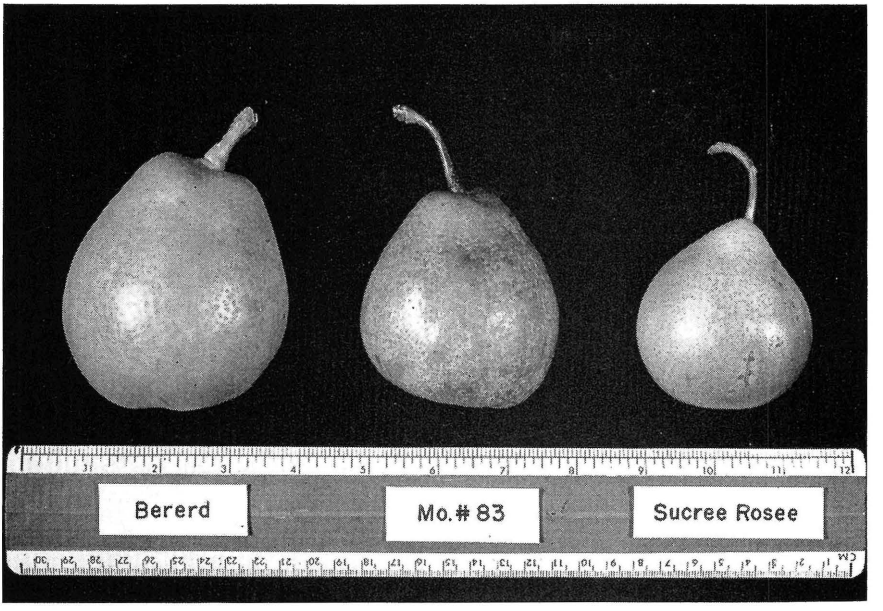

Fig. 21

Fruit characteristics: (Figure 22)
Size: medium
Shape: obtuse obovate pyriform
Color: greenish-yellow with some russeting
Flesh: white to yellow, firm, medium crisp to tender, juicy, sweet to subacid; stone cells confined to core region
Flavor: fair to good
Harvest date: second week in October
Keeping quality: Reported to shrivel without reaching maturity (U.S.D.A.)

General notes: Late harvested variety of no particular attractiveness although flavor is reasonably good.

STANLEY

Synonyms: none
Origin: Originated as a cross between Josephine de Malines and Winter Nelis
Source: U.S.D.A. from C. A. Nobelius, Emerald, Victoria, Australia 7/25/39 as P. I. 133594; from U.S.D.A. in 1941
Description:
Nobelius Nursery Catalog 1939
Fruit characteristics: (Figure 19)
Size: above medium to large
Shape: obovate pyriform to turbinate, irregular shaped
Color: greenish-yellow, fine russet over nearly entire fruit, similar to Sheldon, may have roughened appearance in some seasons
Flesh: white to yellow, fine, medium, crisp to tender, medium dry, sweet to subacid; stone cells scarce, not objectionable, confined to core region
Flavor: fair to good
Harvest date: last week of September
Keeping quality: good, holds well into December

General notes: Holds flavor and texture well into December. One of best late keeping varieties of good flavor in collection. Not as late as reported. Should have further observation.

STARKING DELICIOUS

Origin: Ohio, but exact date and location unknown
Source: Stark Bros. Nurseries and Orchards Co., Louisiana, Missouri in 1953
Description:
Stark Bros. Nurseries and Orchards Co. Catalog 1955-56
Fruit characteristics: (Figure 16)
Size: medium
Shape: obovate pyriform turbinate, short, thick neck
Color: greenish-yellow to yellow, lemon yellow when ripe
Flesh: white to yellow, firm, medium, crisp to tender, juicy, subacid; stone cells scarce, not objectionable, beneath skin

Flavor: fair to good, lacks depth
Harvest date: last week in August, close to Bartlett season
Keeping quality: holds similarly to Bartlett

General notes: Fruit resembles Maxine in practically all characteristics. Seems to lack depth of flavor. Considerable blight resistance.

SUCREE ROSEE

Synonyms: none
Origin: U.S.D.A. from France as P. I. 199660; from U.S.D.A. in 1953
Description:
None available
Fruit characteristics: (Figure 21)
Size: small to medium
Shape: oblong obovate, neck obscure
Color: yellowish-green with dull red blush, not attractive
Flesh: yellow, soft, medium coarse, juicy, sweet to subacid; stone cells confined largely beneath the skin
Flavor: fair to good
Harvest date: first week of October
Keeping quality: holds well for month
General notes: Medium size, unattractive.

SURE CROP

Synonyms: none
Origin: unknown
Source: Interstate Nurseries, Hamburg, Iowa, in 1952
Description:
None available
Fruit characteristics: (Figure 12)
Size: large to very large
Shape: oblong ovate pyriform to obovate pyriform
Color: greenish-yellow, some russet over surface
Flesh: yellow, firm to soft, medium fine, buttery, tender, medium dry, subacid; stone cells confined to core region
Flavor: fair
Harvest date: first week of October

General notes: Large, not particuuarly attractive. Seems to have no outstanding characteristics.

TAIT

Synonyms: Tait No. 1
Origin: Originated by David Tait, Carterton, Ontario
Source: Andrews Nurseries, Faribault, Minn. in 1938
Description:
Leslie, W. R. 1946. Tree fruits grown in Prairie Orchards. Dom. Can. Farmers Bul. 135
Spangelo, L. P. S., W. R. Phillips and D. S. Blair. Pears. Progress Report 1949-53. Central Experimental Farm, Ottawa. Page 33

Fruit characteristics: (Figure 9)
Size: small
Shape: round to somewhat oblate
Color: pale lemon yellow
Flesh: white to yellow, soft, medium tender, juicy, sweet to subacid; stone cells scattered through flesh and in core region
Flavor: fair
Harvest date: third to fourth week of August
Keeping quality: softens rapidly following harvest

General notes: Reported to be very hardy and resistant to fire blight. Unattractive small fruit but sweet and juicy when ripe.

TARDIVE de NINOVE

Synonyms: none
Origin: Seedling grown at Ninove, Eastern Flanders about 1860. First fruits produced about 1867
Source: U.S.D.A. from L. Lens, Wavre-Notre Dame, Le Malines, Belgium 2/20/39 as P. I. 131568; from U.S.D.A. in 1941
Description:
Burvenich, Fred. 1897. Poire Tardive de Ninove. Bul. d' Arboriculture. (Belgium). Pages 145-146
Op de Beeck Nursery Catalog, 1938-39; Lens Nursery Catalog 1938-39
Fruit characteristics: (Figure 25)
Size: above medium
Shape: rounded turbinate to obovate pyriform
Color: greenish-yellow
Flesh: yellow, firm, coarse, tough, medium dry, subacid, some tannin; stone cells abundant, objectionable, scattered through flesh
Flavor: poor
Harvest date: second week of October

General notes: No commercial value. Flavor and quality inferior. Fruits do not ripen at Wooster as satisfactorily as desired.

TWENTIETH CENTURY

Synonyms: none
Origin: Japanese pear variety of obscure origin
Source: U.S.D.A. from Japan as P. I. 186636; from U.S.D.A. in 1954
Description:
None available
Fruit characteristics: (Figure 12)
Size: small to below medium
Shape: round, apple-shaped
Color: greenish-yellow
Flesh: white to yellow, firm, medium fine, crisp to tender, very juicy, sweet; stone cells few, confiened to core region
Flavor: poor
Harvest date: first week of September

General notes: Reported to be of the highest quality of any Japanese pear. Definitely of oriental origin.

TYSON

Synonyms: none
Origin: Seedling found about 1794 in Pennsylvania
Source: unknown
Description:
Hedrick, U. P. **Pears of New York.** Pages 222-223. (See also for list of earlier citations 1846-1914)
Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York
Fruit characteristics: (Figure 6)
Size: small
Shape: roundish, turbinate, pyriform
Color: greenish-yellow, blushed with red, some fine russet on surface
Flesh: white to yellow, soft, fine, tender, melting, juicy, sweet to subacid; stone cells scarce
Flavor: good to very good
Harvest date: second week of August
Keeping quality: short season only
General notes: Small, early season variety, valuable only for home use.

U.S.D.A. 348204

Origin: unknown
Source: U.S.D.A. in 1948
Description:
None available
Fruit characteristics: (Figure 22)
Size: medium
Shape: obovate pyriform
Color: yellow, blushed red
Flesh: yellow, firm, medium tender, juicy, subacid; stone cells confined to core region
Flavor: fair
Harvest date: first of October
General notes: Reasonably attractive. No particularly outstanding characteristics.

U.S.D.A. P. I. 170065

Synonyms: none
Origin: unknown
Source: U.S.D.A. from scions collected from Government Fruit Nursery Station, Province of Van, Turkey, G.F.N. No. 2; from U.S.D.A. 1952
Description:
None available

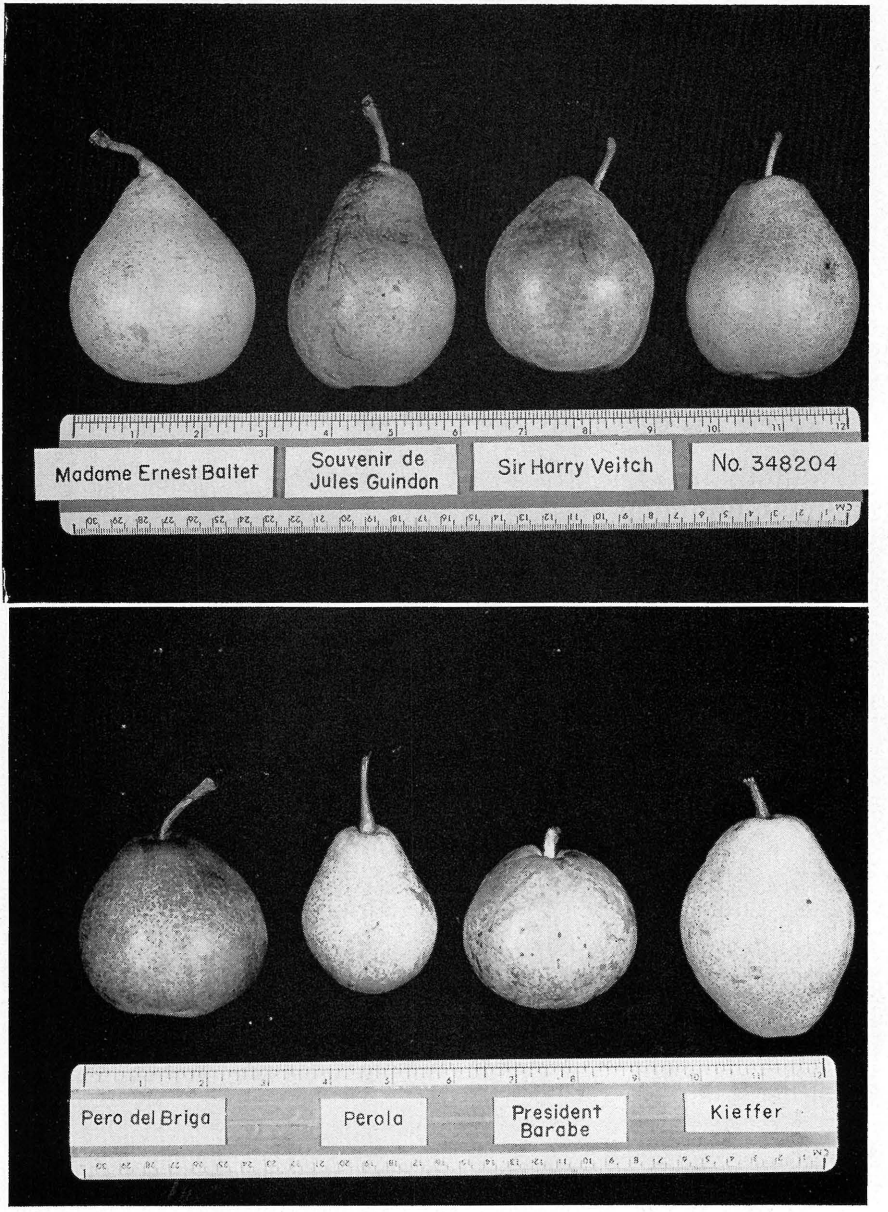
Madame Ernest Baltet
Souvenir de Jules Guindon
Sir Harry Veitch
No. 348204
Pero del Briga
Perola
President Barabe
Kieffer

Fig. 22

Fruit characteristics: (Figure 8)
Size: medium
Shape: turbinate, neck wanting
Color: yellowish-green, occasionally blended with red, gritty surface
Flesh: yellow, soft to firm, medium, crisp, tender, juicy, unpleasantly sweet; stone cells confined to core region
Flavor: poor
Harvest date: third week of August
Keeping quality: breaks down quickly

General notes: No outstanding characteristics.

U.S.D.A. P. I. 170066

Origin: unknown

Source: U.S.D.A. from scions collected from Government Fruit Nursery Station, Province of Van, Turkey. G.F.N. No. 7; from U.S.D.A. 1952

Description:
None available

Fruit characteristics: (Figure 14)
Size: above medium to large
Shape: obovate pyriform, resembles Bartlett
Color: yellow, a slight russet or blush resembles Bartlett
Flesh: yellow, firm, medium, tender, juicy, subacid; stone cells scarce
Flavor: fair
Harvest date: second week in August

General notes: Early ripening, probably Bartlett seedling. Reasonably good quality. Very susceptible to fire blight.

U.S.D.A. P. I. 170078

Origin: unknown

Source: U.S.D.A. from scions collected from Government Fruit Nursery Station, Province of Van, Turkey. G.F.N. No. 31; from U.S.D.A. 1952

Description:
None available

Fruit characteristics: (Figure 19)
Size: above medium to large
Shape: obovate to obovate pyriform
Color: green, blushed with yellow
Flesh: yellow, firm, coarse to medium, subacid, dry; stone cells confined to core region
Flavor: poor
Harvest date: second week in October

General notes: No commercial value, flavor unsatisfactory, a late harvested seedling. Very susceptible to fire blight.

U.S.D.A. P. I. 170083

Origin: unknown

Source: U.S.D.A. from scions collected from Government Fruit Nursery Station, Province of Van, Turkey. G.F.N. No. 59; from U.S.D.A. 1952

Description:

None available

Fruit characteristics: (Figure 19)

Size: small

Shape: turbinate to ovate globular

Color: yellow with red blush on some fruits

Flesh: yellow, firm, coarse, juicy, sweet; stone cells confined to core region

Flavor: fair

Harvest date: third week of October

Keeping quality: reasonably good

General notes: Small, one of latest harvested of this series.

U.S.D.A. P. I. 170084

Origin: unknown

Source: U.S.D.A. from scions collected from Government Fruit Nursery Station, Province of Van, Turkey. G.F.N. No. 54; from U.S.D.A. 1952

Description:

None available

Fruit characteristics: (Figure 11)

Size: medium

Shape: globular to obovate

Color: lemon yellow

Flesh: white to yellow, hard, coarse, tough, medium dry, sweet to subacid, woody; stone cells scarce, confined to core region

Flavor: poor

Harvest date: second week of October

General notes: Did not ripen satisfactorily at Wooster.

VINELAND 29012

Origin: Originated at Horticultural Experiment Station, Vineland, Ontario as cross of Bartlett with P. I. 26485 (Canada), a sand pear type

Source: U.S.D.A. from Horticultural Research Station, Vineland, Ontario in 1943 as P. I. 145818; from U.S.D.A. in 1951

Description:

Dickson, G. H. 1953. Pear Breeding 1913-1952. Hort. Exp. Sta. and Products Laboratory Report for 1951 and 1952. Ontario Dept. Agr. Pages 32-37

Fruit characteristics: (Figure 12)

Size: small

Shape: roundish, flattened at base, very long stem, neck and cavity wanting

Color: yellow blushed with red
Flesh: yellow, soft, fine, buttery, tender, juicy, sweet to subacid, aromatic; stone cells scarce, confined to core region
Flavor: poor to fair
Harvest date: fourth week in August

General notes: No outstanding characteristics.

VINELAND 29014

Origin: Originated at Horticultural Experiment Station, Vineland, Ontario, by crossing Bartlett with P. I. 26485 (Canada) a sand pear type

Source: U.S.D.A. from Horticultural Experiment Station, Vineland, Ontario, 4/15/43 as P. I. 145819; from U.S.D.A. in 1951

Description:
Dickson, G. H. 1953. Pear Breeding 1913-1952. Hort. Exp. Sta. and Products Laboratory Report for 1951 and 1952. Ontario Dept. Agr. Pages 32-37

Fruit characteristics: (Figure 10)
Size: medium to below medium
Shape: oval to obovate pyriform
Color: greenish-yellow, blush on some fruits
Flesh: white to yellow, firm, medium crisp to tender, juicy, subacid; stone cells scarce, not objectionable, confined to core region
Flavor: poor
Harvest date: second week in September

General notes: Size small and flavor not satisfactory. Quite susceptible to fire blight.

VINELAND 29018

Origin: Originated at Horticultural Experiment Station, Vineland, Ontario by crossing Bartlett with P. I. 26485 (Canada), a sand pear type

Source: U.S.D.A. as P. I. 145821 from Horticultural Experiment Station, Vineland, Ontario 4/15/43; from U.S.D.A. in 1951

Description:
Dickson, G. H. 1953. Pear Breeding 1913-1952. Hort. Exp. Sta. and Products Laboratory Report for 1951-1952. Ontario Dept. Agr. Pages 32-37

Fruit characteristics: (Figure 24)
Size: large
Shape: roundish to obovate obtuse pyriform
Color: green
Flesh: yellow, firm, coarse, crisp to tender, juicy, vinous, subacid; stone cells abundant, scattered through flesh
Flavor: poor to fair
Harvest date: second week in October

General notes: Flavor poor to fair, definitely exhibits Oriental inheritance.

WAITE

Synonyms: none

Origin: Originated by M. B. Waite U.S.D.A. by pollinizing Kieffer in Arlington, Virginia about 1902. Introduced commercially in 1938. Known as U.S.D.A. 66131

Source: U.S.D.A. in 1938

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 121

Fruit characteristics: (Figure 25)

Size: medium

Shape: obovate pyriform

Color: greenish-yellow

Flesh: yellow, firm, medium crisp to tough, juicy, subacid; stone cells abundant, somewhat objectionable, confined to core region

Flavor: poor

Harvest date: second to fourth week of October

General notes: Has never softened properly at Wooster though harvested late. Blight resistant. Shows Oriental inheritance.

WILLARD

Synonyms: none

Origin: Originated by the New York Agricultural Experiment Station, Geneva, New York as a cross between Bartlett × Dorset. Introduced for trial in 1931

Source: New York State Fruit Testing Association, Geneva, New York in 1931

Description:

Brooks, Reid M. and H. P. Olmo. 1952. **Register of New Fruit and Nut Varieties, 1920-1950.** University of California Press. Page 122

Fruit characteristics: (Figure 24)

Size: above medium to large

Shape: obovate pyriform, rough, irregular

Color: greenish-yellow blushed with red

Flesh: yellow, firm, coarse to medium, tough, juicy, sweet to subacid; stone cells not objectionable

Flavor: poor to fair

Harvest date: third week in October

Keeping quality: unknown

General notes: Has never ripened properly at Wooster regardless of time of harvest; remains firm or somewhat wilted and has been unsatisfactory in this respect during entire period of trial. Presumably suited to areas of different climatic conditions, possibly of lower average summer temperatures.

WINTER COLE

Synonyms: Cole's Winter, Cole
Origin: Seedling of Winter Nelis
Source: U.S.D.A. from J. Brunning and Sons, Somerville, Victoria, Australia 7/19/38 as P. I. 129643; from U.S.D.A. in 1940
Description:
Heigs, Samuel B. 1895. Report of the Pomologist for 1895. U.S.D.A. Rept. Page 37
Picnic Point Nurseries, Bairnsdale, Victoria Nursery Catalog 1939
Brunning Nursery Catalog 1939
Nobelius Nursery Catalog 1939
Rosen Nursery Catalog 1939
Wicks Nursery Catalog 1939
Conway, T. 1949. Varietal Characteristics of Pip Fruits. New Zealand Jour. Agr. 78:359, 361-364
Fruit characteristics: (Figure 24)
Size: small
Shape: rounded, obovate pyriform
Color: greenish-yellow overspread with considerable fine russet
Flesh: white to yellow, soft, fine, buttery, tender, juicy, sweet to subacid, some tannin occasionally; stone cells scarce, not objectionable
Flavor: fair
Harvest date: second week in October
Keeping quality: apparently keeps reasonably well

General notes: No outstanding characteristics except late harvest period. Fruits too small at Wooster.

WINTER NELIS (LARGE STRAIN)

Origin: Presumably a bud mutation of Winter Nelis. Winter Nelis raised from seed at Mechlin, Belgium early in 19th century
Source: Budwood (P.R.–25) obtained from A. D. Shamel, Riverside, California in 1935. Obtained by Shamel from Edward Veckman Orchard, Puyallup, Washington in 1932
Description:
Bunyard, Edward A. 1920. **A Handbook of Hardy Fruits.** Murray. London
Hedrick, U. P. 1921. **Pears of New York.** Pages 232-234. (See also for list of earlier citations 1830-1909)
Fruit characteristics: (Figure 21)
Size: larger than Winter Nelis but other characteristics similar.

WINTER NELIS (RUSSET STRAIN)

Origin: Presumably a bud mutation of Winter Nelis
Source: Budwood obtained from A. D. Shamel, Riverside, California in 1935 as P.R.26–B. Obtained by Shamel in 1932 from Arthur Karr Orchard, Yakima, Washington

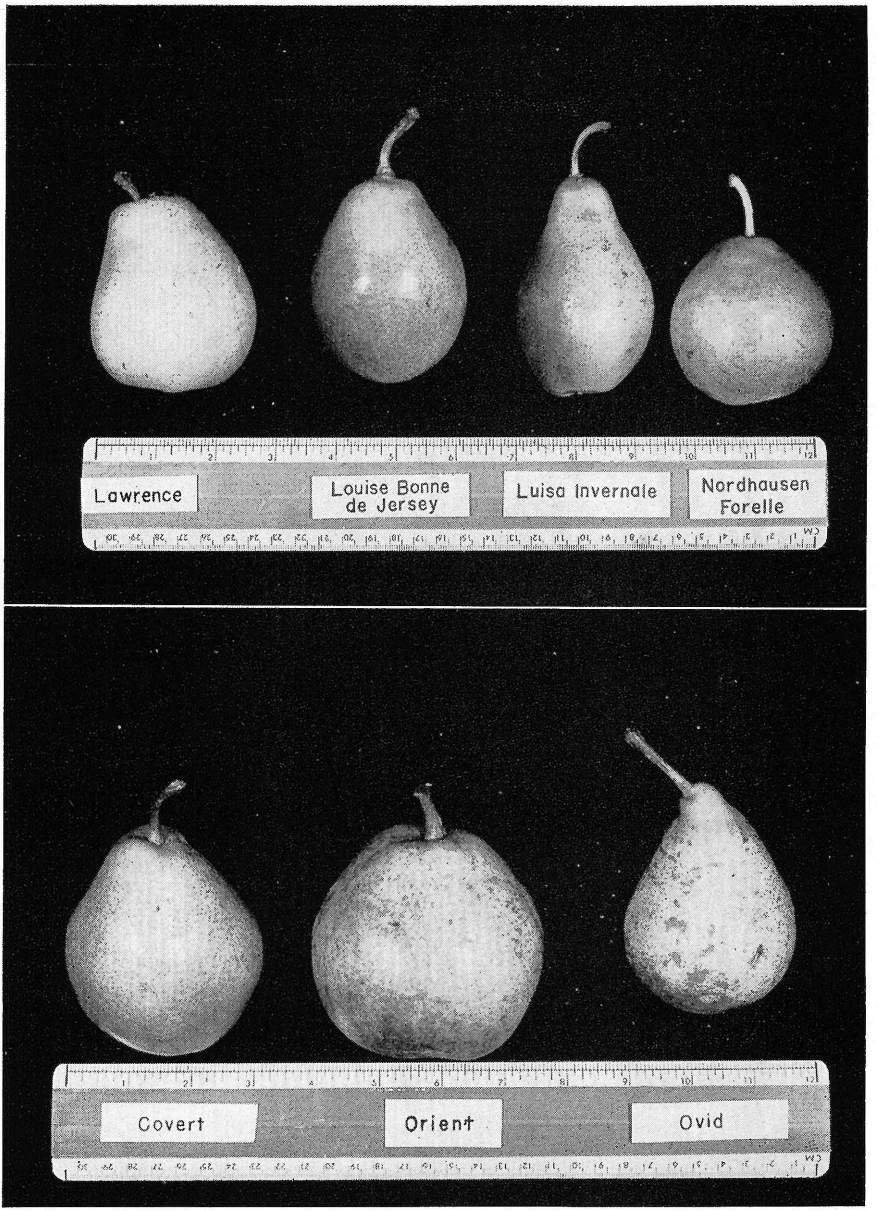
Lawrence
Louise Bonne de Jersey
Luisa Invernale
Nordhausen Forelle
Covert
Orient
Ovid

Fig. 23

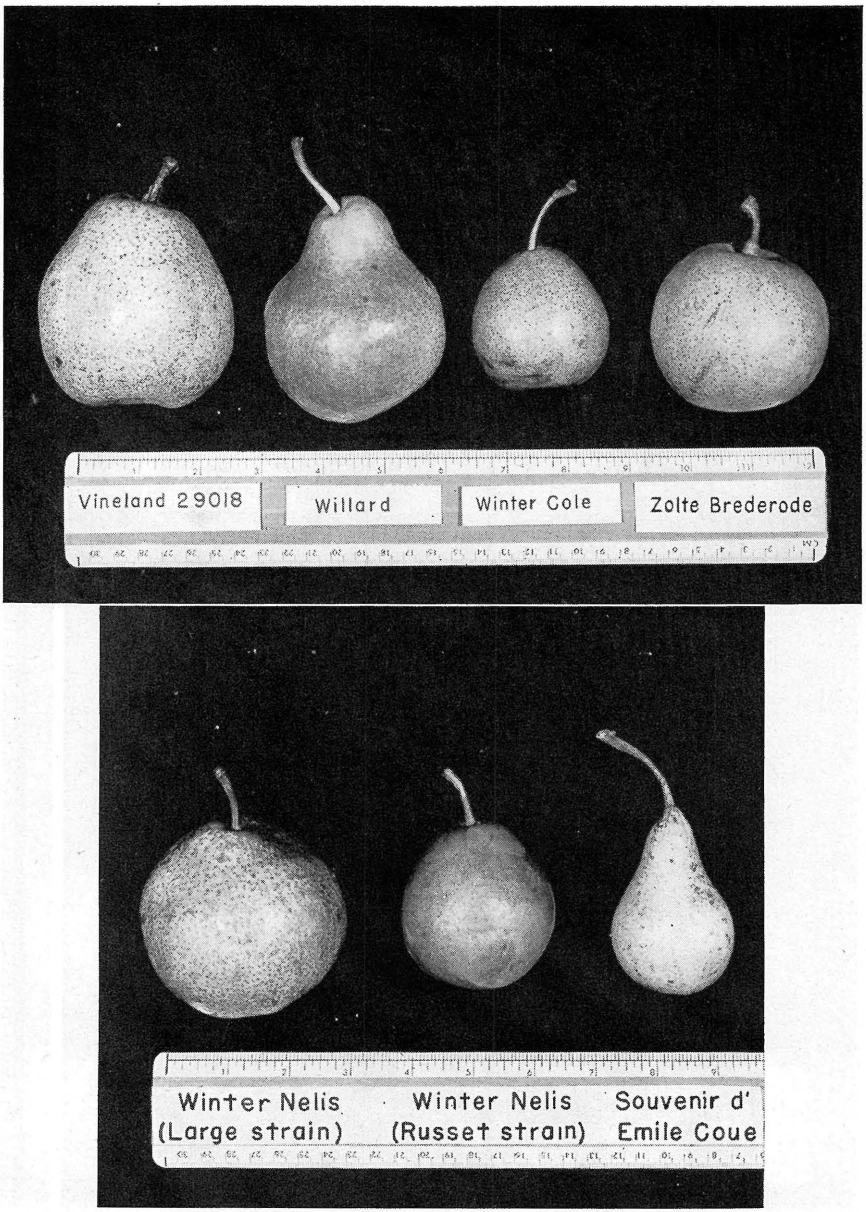
Vineland 29018
Willard
Winter Cole
Zolte Brederode
Winter Nelis (Large strain)
Winter Nelis (Russet strain)
Souvenir d' Emile Coue

Fig. 24

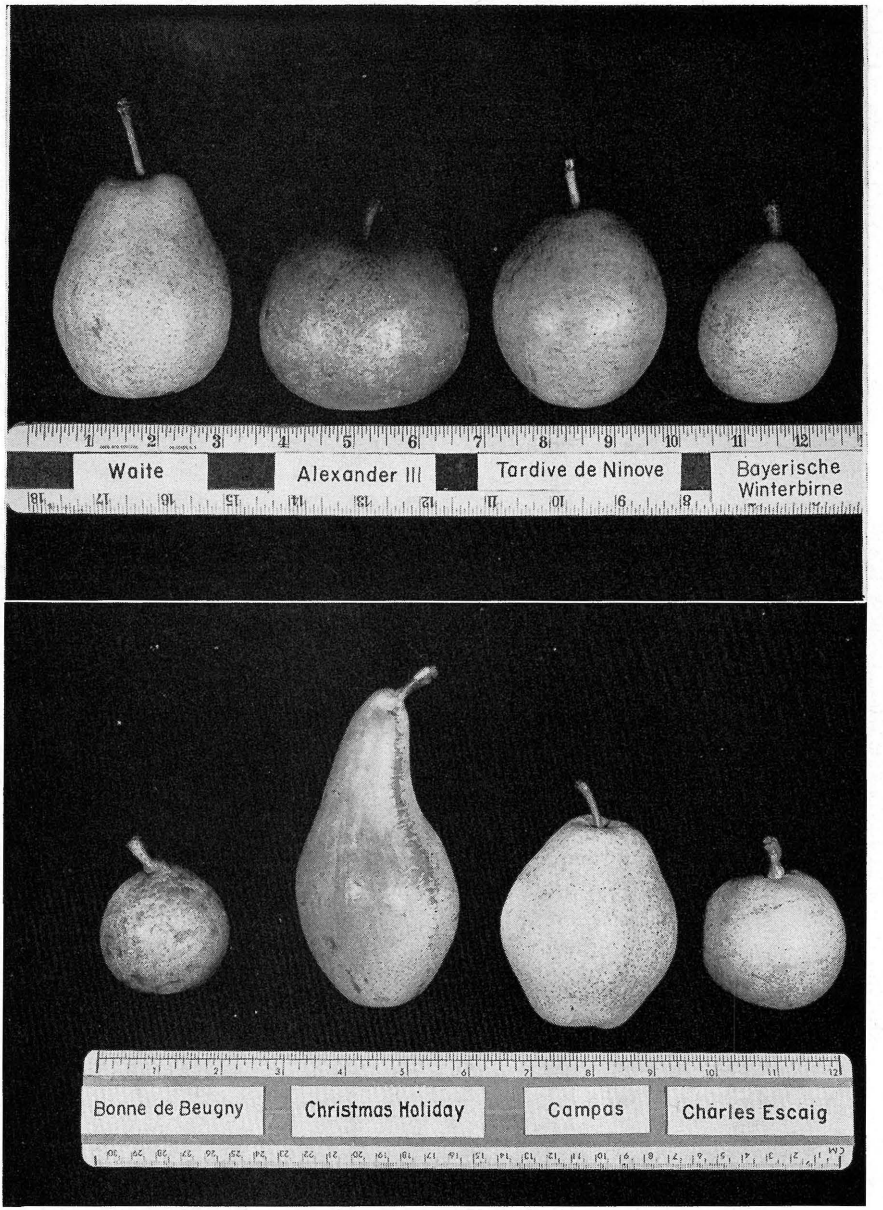
Waite
Alexander III
Tardive de Ninove
Bayerische Winterbirne
Bonne de Beugny
Christmas Holiday
Campas
Charles Escaig

Fig. 25

Fruit characteristics: (Figure 24)

Size: similar to Winter Nelis, below medium

Shape: similar to Winter Nelis, roundish turbinate

Color: fine russet over entire fruit, occasionally roughened

Flesh: yellow, soft, fine, buttery, tender, juicy, sweet; stone cells: some but not objectionable

Flavor: good

Harvest date: fourth week of October

Keeping quality: good to very good

General notes: Similar to Winter Nelis in most characteristics. One of best flavored late winter pears. Possibly more attractive than the non-russeted type. Recommended where a late harvested, good quality variety is desired for home gardens, roadside or farm markets.

WORDEN SECKEL

Synonyms: none

Origin: Seedling of Seckel raised in Oswego County, New York about 1881

Source: Bountiful Ridge Nurseries, Princess Anne, Maryland in 1937

Description:

Hedrick, U. P. 1921. **Pears of New York.** Pages 234-235. (See also for list of earlier citations 1891-1909)

Hedrick, U. P. 1922. **Cyclopedia of Hardy Fruits.** Macmillan Co. New York

Fruit characteristics: (Figure 14)

Size: small but larger than Seckel

Shape: roundish turbinate to obovate acute pyriform

Color: greenish-yellow having overspread with fine russet, attractive

Flesh: white to yellow, soft, fine, buttery, tender, melting, juicy, sweet; stone cells scarce to absent, confined to core region

Flavor: good to very good

Harvest date: second week in September

General notes: Like Seckel this variety has never become of real commercial importance.

ZOLTE BREDERODE

Synonyms: Zochter Braderode, Zoete Brederode

Origin: Probably a 19th century variety originated in The Netherlands

Source: U.S.D.A. from C. J. Gerritsen, Wageningen, Holland 4/3/50 as P. I. 188536; from U.S.D.A. in 1952

Description:

None available

Fruit characteristics: (Figure 24)

Size: medium to above medium

Shape: globular, flattened

Color: green, some fruits with red blush

Flesh: observed only in 1955. Fruits did not ripen properly.

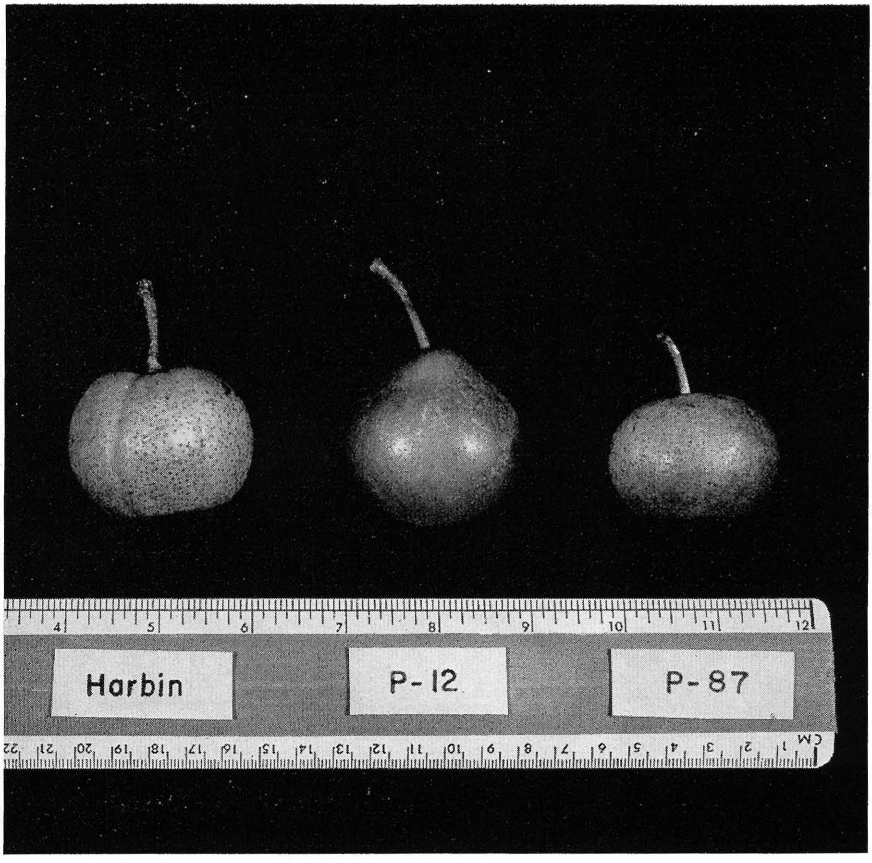

Fig. 26

DISCUSSION

As previously indicated, this evaluation of new and uncommon pear varieties must be considered primarily as ground work, the necessary basis for a continuance of work on pear production and breeding. Admittedly it is easier and safer to draw conclusions as to the unsuitability of a variety for immediate commercial use than it is to appraise its value for use in breeding a new and improved variety. For instance such characteristics as small size or even poor flavor might be overlooked in a European variety if that same variety proved capable of contributing a definite factor for blight resistance to its progeny. On the other hand long continued maintenance of an unwieldy collection of varieties having unfavorable fruit characteristics must also be considered dubious from a purely practical angle. Under these circumstances it is to be hoped that a pertinent program dealing with blight susceptibility will very shortly continue the selective process here begun. Until that phase is dealt with drastic reduction even of seemingly unlikely varieties should presumably be postponed.

But in considering certain of the re-introduced varieties purely from the viewpoint of fruit characteristics it becomes quite apparent that a number of these are definitely unacceptable from the commercial viewpoint. The same conclusion holds true for recent origins in this country and for European varieties never before tested here. On the other hand contrary reports from New York state on the American varieties Ovid, Willard and Waite demonstrate the fact that the environmental factor is an important variant in any evaluation and that further examination along this line is necessary.

Qualifications for consumer demand and thus for commercial acceptance are rigid, with fruit flavor holding top priority and size being next in importance. In addition the precise time of harvest and use are of very real consequence to the commercial producer, although the home or suburban gardener may put less emphasis on this factor. Both, however, will require a fruit of high quality.

Although Beurré Bosc has gained an impressive degree of consumer acceptance the unfailing standard for comparison is Bartlett, which to the mind of the consumer in general is practically synonymous with pear genus itself. The admittedly superior quality of Bartlett is probably responsible in part for a lack of concentrated effort to expand the varietal possibilities, to lengthen the season and increase the blight resistant factor. But in any case it must be admitted that any recommended variety will have to compete with Bartlett quality. It is for this reason that comparisons listed in this publication have been based on Bartlett as the standard.

The summary presented below includes those varieties or seedlings which while they cannot be considered superior in flavor to Bartlett, nevertheless possess certain characteristics which justify their consideration as supplements to that variety. While it is admitted that in the North, Bartlett is considered the primary and often the only variety for commercial planting, yet under certain circumstance others may prove of limited value. Operators of roadside farm markets, for instance, may find that certain additional varieties would extend the season and prolong pear sales. Home gardeners will also certainly be interested in a succession of varieties following the early-season Bartlett. For the purpose of ready reference the varieties are grouped according to the month of harvest.

Month	Varieties Now Commercially Accepted	New or Uncommon Varieties Deserving of Continued Trial for Commercial or Home Garden Use
August	Clapp Favorite	Early Seckel Laxton's Superb
September	Bartlett Beurré Bosc Beurré d' Anjou	Beierschmitt Max-Red Bartlett Laxton's Progress Russet Bartlett Ewart Ottawa 291 Canada 25141 New York 7620 Clyde
October	Winter Nelis	Beurré Dumont Laxton's Record Madame Ernest Baltet Dana Hovey Winter Nelis (Russet Strain)

In addition there are several other varieties among those on test which should be observed further with respect to possible addition to this group. They are:

Laxton's Foremost	Charles Escaig
Laxton's Wonderful	Stanley
Laxton's Satisfaction	President Barabe
Devoe	

It should also be understood that a considerable number of the varieties under evaluation are quite susceptible to fire blight. Particular notation of this characteristic as found at Wooster is included herein. Classification of the varieties in terms of relative blight susceptibility would have been most helpful. However all that is presently available is information with respect to the amount and frequency of removal of infected portions from the trees, data similar to that presented by Reimer (15) in 1925. This is on file at Wooster together with the notes made available by the Section of Plant Introduction, indicating the extent of tree loss at Glenn Dale. To obtain full and reliable information with respect to relative blight susceptibility would have required the propagation of a number of trees of each variety and recourse to controlled inoculation tests. Furthermore, it would appear somewhat more reasonable to limit such an evaluation to those introductions which already exhibit some characteristics of superiority with respect to size and flavor. Such varieties would presumably be of the greatest value in a breeding program designed not only to obtain blight resistant seedlings but seedlings which would also possess characteristics required for consumer and commercial appeal. This preliminary report offers such a selection.

In this evaluation no varieties of known oriental inheritance provided fruits of really good flavor, although several could be said to rate as fair. These were Maxine (inheritance not definitely determined), Richard Peters, Baldwin and the old and fairly familiar Lincoln variety. Where blight resistance is of utmost importance recourse would have to be made to these or others of admittedly oriental inheritance. For as far as is known at present none of the varieties of European inheritance having good or superior flavor are sufficiently blight resistant to risk planting where the blight hazard is extreme. It is true, however, that the varieties of European inheritance such as Beierschmitt and Ewart are somewhat more blight resistant than Bartlett and Beurré Bosc. But future production in southern Ohio, for instance, would still seem to depend upon the breeding of a blight resistant variety of good quality.

PRESSURE TESTS AS HARVEST INDICATORS

During the period from 1947-1955 pressure tests were made whenever a sufficient number of fruits was available (Tables 2-9). With the exception of a few varieties such as Bartlett, Conference and Beurré Bosc, the precise range of pressure denoting harvest readiness had not been previously determined due to lack of experience. Under these circumstances it was necessary to use the pressure test as supplementary

rather than a definitive indication of time to harvest. Data toward the establishment of standards for pressure testing were only a secondary intention.

In spite of marked variation in seasons it was interesting to note that results of testing any one variety did not vary to any great extent in response to seasonal differences—the chief exception being the definite reaction to the 1947 season characterized by an all-time August high temperature and rainfall. In this connection it is interesting to note that Ryall, Smith and Pentzer (16) reported a fairly consistent uniformity in fruit firmness from season to season in the Pacific Northwest and that Overholser, Overley and Almendinger (13) also verify the 1947 exception by stating that pears grown under high temperature conditions tend to mature with a higher pressure rating than when grown under cooler conditions and with ample irrigation.

The pressure tests also showed that differences between varieties occur rather consistently from season to season. A few tended to show relative softness when other indices exhibited harvest readiness. Among these were Beierschmitt, Maxine, Patten, Beurré d' Anjou, Louise Bonne de Jersey, Lawrence and Waite. At the other extreme are the varieties Olivier de Serres, Ovid and Bayerische Winterbirne which showed unusual firmness while other indices pointed to readiness for picking. The great mass of new and uncommon varieties should be included in an intermediate group showing a pressure of 11-14 lbs. at harvest. By comparing such data as are available from West Coast studies it would appear that pressure test values obtained at Wooster fall rather generally within the range of limits recommended for proper time of harvest, though values at Wooster are naturally at the lower end of the range since these fruits were not to be subjected to long-distance shipment. The point is that since such data as were available elsewhere corroborated results with the same few harvested at Wooster, it would seem reasonable to assume that the majority of other varieties were also picked at a time which would give the best flavor and texture commensurate with northern Ohio conditions.

EFFECT OF ENVIRONMENT ON EVALUATION OF VARIETIES

The extent to which the fruit characteristics of a given pear variety may be altered under varying environmental conditions naturally poses a problem in all evaluation tests. That the pear may be peculiarly subject to such alteration may have been overlooked since the Bartlett variety upon which the American pear industry now so largely depends

is apparently unusually adaptable and quite tolerant of variations in sunlight, moisture, soil and air temperature. This may be less true of other varieties.

In this connection it is interesting to note that European pear literature (3, 4) and descriptive texts frequently give rather careful, though unsubstantiated descriptions of the peculiar requirements of a particular variety. They may emphasize the importance of "south wall", "heat", or "favorable exposure". This, together with the fact that European reports concerning flavor and appearance appear much more optimistic than those available in this country, leads one to the supposition that these apparent discrepancies may be due in part to variations produced by a difference in environmental factors.

This discrepancy is particularly noticeable in comparing the Wooster reports on certain varieties with reports from abroad. Notable examples are Beurré Baltet Pere, Luisa Invernale and Duchesse de Bordeaux. Regardless of a possible tendency to overrate varieties at the time of commercial introduction it is unlikely that the descriptions should vary to such a degree unless some other factor enters in. It is possible that differing environmental conditions are the factor responsible.

The behavior of different varieties in different seasons even at Wooster also points to this conclusion. For example the variety Doyenne Georges Boucher may develop a reasonably good flavor in one season while in another the fruits may never soften to an edible condition. Similarly Beurré d' Anjou as grown at Wooster has never developed the fine flavor characteristic of that variety as grown in the West. Doyenne du Comice also has never equalled here the flavor and appearance of the western fruits.

Extreme examples of this discrepancy are to be noted in the case of Alexander III and Tardive de Ninove which have never in any season softened satisfactorily at Wooster regardless of the ripening temperature. The late harvested varieties with oriental inheritance, Campas and Canner have produced a similar record. Other examples might be given: reference has already been made to Ovid, Willard and Waite. These citations should be sufficient to call attention to the fact that evaluation under various environmental conditions would be valuable in indicating the extent to which environmental conditions modify fruit and other characteristics of the varieties in question.

While a more definitive evaluation of pear varieties might seem highly desirable, it would nevertheless imply a less challenging situation than the one now obtaining. The fact that the varietal picture is presently more or less formative implies that the whole field of pear breeding

is open to intensive and highly productive effort. This preliminary evaluation is a beginning which defines the scope of the problem. This publication is a step that had to be taken before the welter of unsatisfactory varieties could be weeded out and an intensive breeding program undertaken, before progress could be made toward a solution of the fire blight problem, before the base of American pear production could be broadened and strengthened throughout the country. Stimulation toward such an undertaking could be one of the principal by-products of this study.

SUMMARY

This preliminary evaluation deals chiefly with new and uncommon pear varieties, some of which were re-introduced by the Section of Plant Industry of the United States Department of Agriculture, while others, although available in Europe, are new to this country. In addition certain varieties recently originated in Europe as well as in the United States and Canada are included. Information concerning certain commercially important varieties as well as others grown in a limited way in home gardens are also furnished by way of a known standard for comparison. Data concerning 138 varieties, strains and seedlings are included in the publication. The evaluation will continue at Wooster since some importations have not yet fruited while others have fruited for little more than a year.

A variety of circumstances necessitated considerable variation in setting up the four different plantings involved. Some trees were established on their own trunk and framework, while others, in an effort merely to maintain the specimen, were topworked on Old Home blight-resistant framework. Both standard and dwarf trees were included. In view of these varied circumstances and due also to the fact that the number of trees was not sufficient to risk loss by inoculation, it was impossible within the limits of this project to obtain detailed information on blight resistance. However, a record has been kept of loss of trees and frequency and amount of removal of blight-infected portions. Even among the varieties of strictly European inheritance, a marked difference in susceptibility was apparent.

In addition to brief general notes with respect to each variety, the data here presented are concerned with major fruit characteristics such as size, shape, color, flesh, flavor, and season of harvest. Some notes relative to keeping quality are also included. A more detailed record of

characteristics such as shape of basin and cavity, lenticels, etc. remains on file at Wooster. With very few exceptions illustrations of a typical fruit of each variety are also presented.

At time of harvest pressure tests of fruits were made of a considerable number of varieties, seedlings and strains during the period from 1947 to 1955. In the case of the new and uncommon varieties, with no definite precedent established it was obviously impossible to harvest the specimens in terms of a standardized pressure test. Considerable uniformity in respect to this test was apparent, however, over the nine year period. During the unusually hot 1947 season the fruit showed more rather than less firmness.

The length of period from full bloom to harvest ranged from 107 to 168 days, representing a difference of 61 days. The length of this period varied somewhat depending upon temperature conditions but seemed relatively little affected by rainfall during the August to October period.

Varieties appeared to differ considerably in their capacity to soften and ripen properly at Wooster. Certain ones, reported as satisfactory in other areas, never softened properly in any Ohio season. Other observations made during the evaluation indicated that pear varieties are subject not only to seasonal variation in respect to fruit characteristics, such as appearance, flesh and flavor but that variations may occur in response to geographical changes. Reports from Wooster differ considerably, for instance, from those originating in other pear producing areas both of Europe and America.

Of the newer varieties which show the most satisfactory fruit characteristics are: Beierschmitt, Beurre Dumont (P. I. 132484), Canada (Vineland) 25141, Clyde, Early Seckel, Ewart, Laxton's Progress (P. I. 127039), Laxton's Record (P. I. 127040), Madame Ernest Baltet (P. I. 104767), Max-Red Bartlett, New York 7620, Ottawa 291, Stanley (P. I. 133594) and Winter Nelis (Russet strain).

The present evaluation is designed to facilitate a further and more definitive selection in terms of such specific purposes as commercial use, home and suburban planting as well as a pear breeding program with blight resistance as one of the possible objectives. In terms of this continuing purpose this preliminary investigation of a large number of varieties narrows the field and gives a more substantial basis for future work. It is to be hoped that as such it also offers stimulation and encouragement.

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